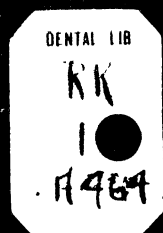
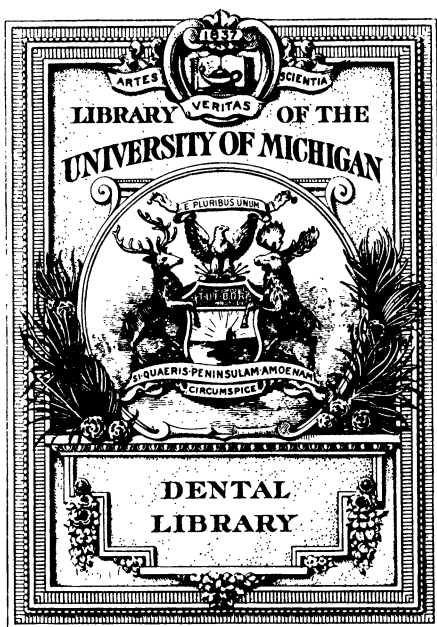


AMERICAN  
DENTAL  
JOURNAL

8  
1909





# AMERICAN DENTAL JOURNAL

PUBLISHED ON THE FIRST OF EVERY MONTH BY FRIK & YOUNG

Vol. 8.

AUGUST, 1909.

No. 8.

## TABLE OF CONTENTS.

	Page.
<b>Post-Graduate Course.</b>	
Operative Dentistry,	
By R. B. TULLER, D. D. S. - - - - -	483
Bacteriology and Pathology,	
By GEORGE W. COOK, B. S., D. D. S., - - - - -	486
<b>Foreign Department.</b>	
Dental Erosion,	
By DR. VAN STRATUM, Paris - - - - -	490
The Production of Anaesthesia of the Upper Incisors and Canines	
Through the Nose,	
LA PRESSE MEDICALE, Paris, - - - - -	492
Neuralgias and the Teeth,	
LE LABORATOIRE ET LE PROGRES DENTAIRE REUNIS, - - - - -	493
Spring Pivots,	
By ZIELER, DEUTSCH ZAHNARTZLICHE ZEITUNG, - - - - -	494
The Administration of Anaesthetics,	
THE BRITISH JOURNAL OF DENTAL SCIENCE, - - - - -	495
Some Secondary Phenomena in Injection Anesthesia,	
By DR. C. FRITZSCHE, Leipzig (Deutsche Monatsschrift) - - - - -	495
A Simple Method of Replacing a Pin Crown When the Root is	
Decayed,	
By DR. JOHN G. S. ANGUS, L. D. S., London, - - - - -	497
The Administration of Anaesthetics,	
THE BRITISH JOURNAL OF DENTAL SCIENCE, - - - - -	499
A Soothing Dressing,	
JOURNAL ODONTOLOGIQUE, - - - - -	499
<b>Original Contributions.</b>	
Toothsome Topics,	
By R. B. TULLER, D. D. S., - - - - -	500
To Prevent Discoloration of Tooth,	
By James H. Pemberton, D. M. D., - - - - -	502
<b>Dental Graduates</b>	503
<b>Abstracts and Selections.</b>	
Seen Through Patients' Eyes,	
FROM DIGEST, - - - - -	506
Modern Views in Treatment of Children's Teeth,	
By CHARLES HALL, - - - - -	510
Complications and Accidents Following Tooth Extraction,	
By CLYDE DAVIS, B. S., M. D., D. D. S., - - - - -	516
<b>Miscellaneous</b>	520
<b>Personal and General</b>	525
<b>With our Advertisers</b>	522
<b>Necrological</b>	528
<b>Dental Patents, Illustrated</b>	529
<b>Want Ads</b>	530, 531, 532
<b>Index to Advertisements</b>	533

# Listerine Tooth Powder

Tooth powders have long been empirically employed, chiefly as a mechanical agent for cleansing the teeth, and with little regard to their composition or chemical action. Many of the articles sold for this purpose contain ingredients prone to fermentative action in the mouth, such as orris root, starch, sugar, etc., and, in addition, pumice stone, cuttlefish bone, or other harmfully abrasive substances.

Listerine Tooth Powder, possessing neither of these objectionable qualities, very acceptably meets all the requirements of a frictionary dentifrice, and promises to give much satisfaction to those who employ it, in conjunction with a mouth-wash of Listerine, suitably diluted.

To dental practitioners of record, the manufacturers will be pleased to send a supply of samples of Listerine Tooth Powder for distribution to patients.

**Lambert Pharmacal Co.**  
**Saint Louis**

# OUR POST GRADUATE COURSE

## OPERATIVE DENTISTRY.

BY R. B. TULLER, D. D. S.

### Discussing Gold.

In this day of gold casting, which has but recently become a feature in the practice of the art of dentistry, it is perhaps pertinent to review some of the qualities of gold and its alloys, and the process of refining that may be put to practice in the routine of every-day office work.

The beautiful color and lustre of gold, and its power to resist oxidation make it one of the most valued of metals, the latter quality being especially valued for use in the mouth. But its thermal conductivity of high degree is a disadvantage in its use for fillings and inlays; modified in the latter instance, however, by the intervening layer of cement between metal and tooth tissue.

At the temperature to which gold is subjected at the hands of the dentist ordinarily, in melting for casting purposes, it is not appreciably volatile so that practically it may be melted and remelted again and again without any loss by volatilization. And yet it has been shown that a piece of polished silver held in the vapor of melted gold will be gilded, and thin gold leaf and fine goldwire may be entirely dissipated by a powerful charge of electricity. As said, however, nothing, practically, is lost by melting and remelting pure gold, as dentists do it.

When gold, however, is alloyed with some of the baser metals, it is quite easy to refine it to a much higher state of purity by burning out, so to speak, the baser metals, and a corresponding loss will, in consequence, occur in weight and size. Thus the remelting of low carat gold will result in some loss of volume and weight with each remelting, but will increase in carat value or degree of purity. Scrap gold of various carats may therefore be easily refined to a high degree in the flame of the blow pipe if properly handled and treated. This

applies to alloys of baser metal and not to alloys made up of platinum or platino iridium in any portion, and the dentist who wishes to turn scrap gold of varying degrees of purity, should be particular to keep separate from such scrap or filings any platinum or iridium clippings or filings. These, incorporated with other scrap and filings, whether they become thoroughly fused or not, become enough so to raise the melting point materially, which may be undesirable; quite enough to frequently make useless the ingot produced for casting purposes, since it will not become liquid enough with an ordinary blow-pipe flame to be run into a mold even under the usual pressure.

There are other metals such as iron, steel, nickel, brass, silver, copper, German silver, etc., that should be most carefully kept away from scrap gold; especially if to be employed for casting. The more of these things in the scrap, the more difficult to refine the gold with the blow-pipe flame, or the process of cupellation.

Absolutely pure gold can hardly be secured by any means of refinement consistent with the usual equipment of the dentist. Owing to the small volume of gold involved in inlay work the blow-pipe refining may be easily done, so that the resultant ingot is very satisfactory, if the fusing or boiling point—beyond fusing—has not been raised too much by metals that, even in minute quantities, produce such results.

A simple process is as follows: Melt the selected scraps into a globule in a pit in a piece of birch-wood or birch charcoal, or a prepared charcoal block such as supply houses keep in stock. Now, mix borax and saltpeter in equal quantities and put a pinch on the globules or ingot. Raise the flame to its hottest capacity and boil the gold for several minutes, repeating the flux several times. Cooling and examining the ingot now and then will permit of examination that may determine the operator to accept it, or go still further. Silver and copper are not thoroughly eliminated without considerable effort, and sometimes it may make no difference if not; the product being harder of course, and less susceptible to bruising and wear than pure gold.

When the ingot has thus been refined to one's satisfaction, it is then taken to the crucible in the inlay flask and melted to boiling and sent home. As to color, silver in small quantities added makes a much lighter shade of gold, while copper makes a deeper shade.

Pure gold as dentists generally know, is the most malleable of all metals. One grain may be beaten into leaves which cover a surface of 56 square inches, and only  $1/282,000$  of an inch thick. It is so ductile that the same amount may be drawn into a wire 500 feet long, and one ounce covering a silver wire is capable of being extended more than half way around the earth. Having in a high degree the property of cohesion when pure, it can be welded cold, and coins or medals may be made by compressing in dies from precipitated gold, as that is pure. Its melting point varies some, but is very close to  $1200^{\circ}$  C.

(To be continued.)

---

#### TO MAKE WAX TRIAL PLATES ADHERE TO THE MOUTH.

All of the older practitioners have heard of powdered gum tragacanth, that some dentists give their patients when they insert the upper plate, telling them if it does not stay to sprinkle a little gum tragacanth on it, and it will stick. I am happy to say that I have not felt the need of that. There are times, however, when it is distinctly useful. When inserting a trial plate to get the bite or to see that the teeth are properly mounted so as to meet all requirements, by sprinkling the palatal surface with gum tragacanth any trouble from the plate not remaining in position will be obviated.—*Digest.*

---

#### OBJECTION TO IMMEDIATE ROOT-FILLING.

I do not believe that immediate filling of the root-canal should be attempted after removal of the pulp by pressure anesthesia, for the reason that the cocain not only anesthetizes the pulp, but a considerable area of the soft tissues at and adjacent to the apical foramen, so that, when filling the root there is no way of determining when the end has been reached by reason of these tissues being devoid of sensation. If the operator uses a method, and has the skill to fill roots to the end he will find, if he fills immediately, that he is more than likely to carry the root-filling into the soft tissue beyond the apical foramen, thus causing the patient much discomfort, and perhaps the loss of the tooth from continued irritation.—*A. J. Cotterell, Dental Brief.*

## BACTERIOLOGY AND PATHOLOGY.

---

BY GEO. W. COOK, B. S., D. D. S., CHICAGO, ILL.

DEAN OF DENTAL DEPARTMENT, UNIVERSITY OF ILLINOIS, PROFESSOR OF  
BACTERIOLOGY, UNIVERSITY OF ILLINOIS.

---

Q. WHAT IS BACTERIOLOGY?

A. Bacteriology is the science that treats of the known lowest forms of vegetable life.

Q. HOW CAN BACTERIA BE STUDIED?

A. By artificial cultivation and by the aid of the microscope.

Q. WHAT IS A MICRO-ORGANISM?

A. A Micro-organism is a form of living substance that can only be seen by the aid of the microscope.

Q. ARE ALL MICRO-ORGANISMS BACTERIA?

A. No. There are organisms that belong to the animal kingdom that can only be seen by the aid of the microscope.

Q. IS THERE ANY DISTINCT LINE BETWEEN THE LOW FORMS OF VEGETABLE AND ANIMAL LIFE?

A. No. The distinctive difference between the two is not always readily brought out.

Q. WHAT DISTINCTIVE IMPORTANCE IS ATTACHED TO BACTERIA?

A. Because they produce putrefaction (decay), fermentation and disease.

Q. WHO WAS THE FIRST TO SCIENTIFICALLY INVESTIGATE AND DEMONSTRATE THAT PUTREFACTION AND FERMENTATION ARE DUE TO THESE LOW FORMS OF LIFE?

A. Pasteur, while investigating spontaneous generation, discovered that the breaking up of dead albuminous substances was due to a living organism. And the process that we now know as fermentation was also caused by a low form of organic life.

Q. WHO WAS THE FIRST TO HAVE DEMONSTRATED THE PRESENCE OF THESE SMALL LIVING OBJECTS?

A. Van Leeuwenhoek, in a letter dated September 14, 1683, to the Royal Society of London, gave drawing and descriptions of some forms of cellular life that he had found in tartar scraped from the



teeth and mixed with water. He says, "that this material contained many tiny animals which moved about in a most amusing fashion. The largest of these showed the liveliest and most active motion moving through the water or saliva, as a fish darts through the sea."

Q. WAS LEEUWENHOEK'S OBSERVATION FOLLOWED BY FARTHER IMMEDIATE RESEARCHES?

A. It was not until 1786 that O. F. Müller, a Danish zoölogist, gave farther knowledge on the importance of bacteria.

Q. WHO GAVE THE NEXT IMPORTANT INFORMATION ON THE SUBJECT OF BACTERIA

A. Ehrenberg, in 1795, gave a description of what he called infusoria or animalcules. These organisms were found floating around in infusions of hay, meat and other organic substances. This investigator was able to give a number of groups of these so-called bacterial forms. Such terms as bacterium and spirillum were given to the science of bacteriology by this author, and they still remain in use. Immediately following this work Dujardin, Purty, Cohn and Nägeli, whose work was soon overshadowed by Pasteur, who demonstrated the presence of bacteria in putrefaction, fermentation and disease.

Q. WHAT IS UNDERSTOOD BY THE BIOLOGY OF BACTERIA?

A. It is that science that treats of living organisms, of their structure, their growth, their life and action.

Q. WHAT IS THE PHYSIOLOGY OF BACTERIA?

A. It is that science that treats of the function of the living organism?

Q. WHAT IS UNDERSTOOD BY A UNICELLULAR ORGANISM?

A. It is an organism that has but one cell and in that cell it is capable of performing all the functions of life, which is nutrition and reproduction.

Q. WHAT IS NUTRITION?

A. It is a process whereby the cell takes into its body substance and utilizes food material.

Q. WHAT IS A FUNGUS?

A. Any one of a class of vegetable organisms that is of a low order of development, including mushrooms, toadstools and moulds.

Q. WHAT IS A MOULD?

A. Any one of a large group of minute parasitic forms of life, including the saprophytic fungi or the growth that they may produce on other forms of living substance.

Q. WHAT IS A PARASITE?

A. It is a plant or animal which lives upon or within the body of another living organism.

Q. WHAT IS A FACULTATIVE PARASITE?

A. It is an organism that is capable of living either on or within the body of another organism, or can live and obtain its nutrition out of dead organic substances.

Q. HOW ARE BACTERIA CLASSED WITH REFERENCE TO THEIR FORM?

A. Coccus, streptococcus, staphylococcus, diplococcus, tetrococcus, bacillus, spirillum, sarcinae and the spirochete.

Q. WHAT IS A MICROCOCCUS?

A. A micrococcus is a spherical cell of bacteria that can only be seen by the aid of the microscope.

Q. WHAT IS A DIPLOCOCCUS?

A. A diplococcus is two spherical cells of bacteria that lie close or attached to each other.

Q. WHAT IS A TETROCOCCUS?

A. It is four round cells that lie together so as to form a square.

Q. WHAT IS A STAPHYLOCOCCUS?

A. It is a number of these round cells lying bunched up together; staphlo meaning like a bunch of grapes.

Q. WHAT IS A STREPTOCOCCUS?

A. A streptococcus is a number of these spherical cells lying in an indefinite line; strepto meaning chain-like.

Q. WHAT IS SARCINAE?

A. Sarcinae means a number of these spherical cells piled up on each other, eight long and four wide; sarcinae meaning like a bale of hay.

Q. WHAT IS A BACILLUS?

A. A bacillus is an organism that is longer than it is broad or round; bacilli meaning rod-shaped.

Q. WHAT IS A SPIRILLUM?

A. A spirillum is an organism the cell of which is elongated and forms a spiro.

Q. WHAT IS A SPIROCHETE?

A. It is a group of bacteria that belongs to the spiro forms although the curves in the cell are shorter.

Q. HOW ARE BACTERIA CLASSIFIED ACCORDING TO THEIR FUNCTION?

A. They are divided into three great groups, putrefaction, fermentation and disease producing.

Q. WHAT DOES THE TERM PUTREFACTION MEAN AS APPLIED TO BACTERIOLOGY?

A. It means the breaking up of dead niterogenous substance (albumins or proteids).

Q. WHAT DOES THE TERM FERMENTATION MEAN AS APPLIED TO THE SCIENCE OF BACTERIOLOGY?

A. It means the breaking up of organic compounds rich in carbon.

Q. WHAT ARE THE SO-CALLED PATHOGENIC BACTERIA?

A. It is that group of bacteria that is capable of establishing a disease process in the animal tissue, including that of man.

Q. WHAT IS FOOD?

A. Food is any material which when taken into the body serves to nourish or builds up the tissues and supplies energy.

Q. WHAT IS BACTERIAL FOOD?

A. It is any substance that can be broken up and taken into the cell of the bacteria and utilized as nutrition.

Q. ARE ALL BACTERIA CAPABLE OF BREAKING UP ALL ORGANIC SUBSTANCE AND ASSIMILATING IT IN THE SAME WAY?

A. Bacteria differ in this respect as much or more than any other living organism.

Q. HOW IS FOOD PREPARED ARTIFICIALLY FOR THE GROWING OF BACTERIA?

A. It is prepared very much in the same way as food is prepared for other forms of living substance.

Q. WHAT THREE COMPOUNDS ARE ESSENTIAL TO ALL LIVING THINGS?

A. Proteids, carbohydrates and fats.

(To be Continued.)

# Our Foreign Department

THOMAS L. LARSENEUR, D. D. S., Foreign Department Editor

## DENTAL EROSION.

BY DR. VAN STRATUM.

(*Le Laboratoire et le Progres Dentaire Reunis*, Paris, May 23, 1909.)

Erosion is a decalcification of the hard tissues of a tooth taking the form of large excavations, which are usually shallow. Of course it is the enamel which is first affected by erosion, its progress on it is much more rapid than upon the dentine. This is the reason why erosion develops mainly on the surface of the tooth affected.

The labial surface of the anterior teeth is where erosion is generally found. In some cases, erosion may be found affecting quite a number of teeth; in other instances it may be found to develop in one or very few teeth.

Enamel is composed of organic matter in the following proportion, 3.59/100, and 96.41/100 of inorganic matter. The calcium salts (phosphates, fluorids, carbonates) form a large percentage of it. (Von Bibra.)

An acid substance only may bring forth the dissolution of such a tissue.

But if a tooth is subjected to the action of an acid *in vitro*, the surface which is attacked by the acid becomes rugous.

Where does the polished surface of erosion come from?

Two hypotheses are possible:

1. The decalcified portion is removed by the friction of the lips, tongue, food and specially the tooth brush. (Miller.)
2. The decalcification is arrested by the striae of Retzius, which apparently seems to determine the form of the excavation.

These striae are pigmented lines which lie in the enamel, having a direction more or less parallel to the exterior surface of the enamel. They correspond to the successive stadium which forms the enamel and seem to be composed of a substance which is more resisting and less soluble to the action of acids.

What is the source of this acid which causes erosion and why does it affect only the labial surface of teeth?

If this acid was the result of lactic fermentation caused by debris of food, the affected lesion would be specially the surface where this debris collects the most, *i. e.*, on the approximal surfaces; but, erosion always takes place on the surfaces which are kept clean by the movement of the lips and tooth brush.

In the mucous membrane of the lips, we find glands secreting mucus.

The secretion of these glands is normally alkaline.

In certain diathesis, especially in arthritic diathesis, this secretion becomes acid.

In fact, erosion is most frequently found in connection with arthritis.

Now, how can we account and explain the acid secretion of the labial glands in arthritis?

Generally this affection is looked upon as being caused by retardation in nutrition.

Instead of reaching its final stage, urea and albuminoids are interfered with somewhere in their oxydation, giving rise to the formation of uric acid, xanthin and hypoxanthin.

What is the cause of this disturbance of nutrition?

Is it due to an excess of the combustible matter, or an abuse of the albuminoids?

Is it due to the insufficiency of oxygen or to the want of red corpuscles? Is it a defect in oxygenation?

Is it due to a lesion of the liver, which transforms the products of decomposition of albuminoids into urea, or is it a disturbance in the function of the cells?

This question, I believe, has not yet been solved.

In all events an excess of urea is found in the tissues of arthritics.

These urates cause an irritation to the cells and particularly to the cells of the labial glands, causing an increase in their secretion.

The urates resist the influence of the phosphates of sodium and form an acid phosphate of sodium producing the acid secretion of these glands. (Hammersten-Kirk.)

#### SYMPTOMS.

First, we have the objective symptom; excavations are seen, their form, their polished surface, and their seat.

Upon examination of the intern surface of the lips, a slight tumefaction of the labial glands may be noticed.

If after drying the mucous membrane of the lips, litmus paper is applied, one will notice the acid glandular reaction from the secretion of these glands. This test naturally must be made in the morning before breakfast. The subjective symptoms may be seen only when the dentine is denuded.

Hyperesthesia of the dentine is very often noticed. Usually, dental erosion is a sign which will appear in the earliest stages of arthritic diathesis.

#### TREATMENT.

The general cause must first be treated, arthritism.

Brubaker proposes cauterizing the labial glands with the electrocautery. In all events, the acid secretion of the glands should be neutralized.

It is at night when the lips are at rest on the labial surface of the teeth that the acid does its work.

To neutralize the acid, the teeth may be covered with calcium carb. precipitatus. One of the best products for this purpose is milk of magnesia.

If the cavities are deep it is advisable to fill them. Alkaline treatment should always be prescribed for the patient.

---

#### THE PRODUCTION OF ANESTHESIA OF THE UPPER INCISORS AND CANINES THROUGH THE NOSE.

(*La Presse Medicale*, Paris.)

The fact, previously known to rhinologists, that the application of a tampon soaked in a cocaine solution to the nasal fossa often produces anesthesia of the upper incisor teeth on the same side, has recently been studied by Escat. The proceeding consists in placing a tampon of wool of the size and shape of an almond in a solution of cocaine the strength of 1 to 20, or better, 1 to 10, which may be combined with a 1/1000 solution of adrenalin.

Stovaine and other anesthetics may be used in the same way.

The tampon is inserted in one or the other nasal fossa, taking care that it lies a little above the anterior end of the lower turbinal, and between it and the septum in front of the lower meatus of the nose.

This is necessary because the anesthetic does not act on the lower part of the nostril, and must come in contact with the dental nerve which crosses the floor of the nose behind the vestibule. Special illumination is not required for adjustment of the tampon. After it is inserted, the patient should bend slightly forward to allow any excess of the solution to escape from the nose instead of being swallowed, as might happen should he keep the usual position in the dentist's chair.

Anesthesia is not apparent till fifteen, or more commonly twenty minutes have elapsed, but attains its maximum in thirty minutes; if the tampon is removed, it persists in its complete form for about fifteen minutes, but does not entirely cease for half an hour.

---

### NEURALGIAS AND THE TEETH.

(*Le Laboratoire et le Progres Dentaire Reunis*, Paris, Nov. 22, 1908.)

When neuralgia is located, as it often occurs, in the head or in the face, we will find that in nearly all cases, the primary cause is caries, and that if these carious teeth are attended to and the mouth restored to a healthy condition, these neuralgic pains will disappear.

In fact, I think that 90 per cent of these cases of facial neuralgia and cephalalgia are due to carious teeth. My records for the past year show 830 new patients, of which forty-nine (or 6 per cent) were affected with neuralgia caused by carious teeth. In all these cases the teeth were not suspected as the cause of neuralgia.

A general neuralgia may sometimes be caused by the teeth, as, for instance in the following case: C. K., age 36, complained of pains in the neck, shoulders, limbs and throughout the body. She was affected with anemia, though she appeared to be in fairly good health. After examination her nervous system proved to be normal, but her mouth was found filled with carious teeth, and her gums were also found to be quite inflamed. She also admitted that she had recently been troubled with cephalalgia.

After all the carious teeth had been extracted, the neuralgic pains ceased at once, and she never afterwards complained of her nerves. This case of general neuralgia must have been of a toxic nature, and caused by the absorption of those toxins into the system, which came from the teeth.

## SPRING PIVOTS.

Zierler (*Deutsch Zahnärztliche Zeitung*).

Spring pivots as advocated by Muller-Wadensweil, which offer great advantages in removable bridge-work, are not always to be had in the desired strength in dental depots. A simple method of manufacturing round spring pivots is the following:

By means of a draw plate with sufficiently large holes, exactly fitting tubes are drawn over wire pins of different sizes and soldered at the seam. In order to prevent the solder from flowing into the interior of the tube and from stopping up the passage from the pivot, a string coated with wet whiting is pulled through the case. The string is left in the case during soldering; its burned remains can easily be removed.

A piece of the tube thus prepared is cut off at the length desired and fitted with a bottom. The soldering of the bottom may be avoided by inserting a fitting oil-coated pin full length of the tube, which will prevent any cement from entering the tube while fastening it into the root-canal.

Along the whole length of the pivot, which is somewhat longer than the tube, a groove is filed, which is to receive the spring. For the springs, round wire of a thickness corresponding to the pivot groove (0.35 to 0.4 mm. thickness) is used.

The spring need not be soldered if it be inserted into a hole in the groove near the lower end of the pivot, and bent at right angles. Before inserting the spring it is slightly bent outward. These spring pivots offer the advantage that the round pivot and its case demand a smaller root-canal than the square pivots, thus leaving the root-walls thicker and stronger. The pivot can also be long and is better fitted to stably carry a crown or a prosthetic piece.

The wire spring is strong and simple, and while holding firmly can easily be exchanged. The only disadvantage is the possibility of a revolution of the pin in the tube.

In bridges this is of no account; in pivot-teeth this danger can be avoided in different ways, especially by uniting at least half a root-cap with the crown. For thick pivots 18 k. gold or even dental alloy, for thinner ones, 20 per cent iridio-platinum can be used. For the springs the following 18 k. alloy of gold and platinum is advisable: Fine gold 18, copper 4, silver 1, platinum 1. According to the material used for the pivot, the tube may be made of 18 k. gold, dental alloy, or iridio-platinum.



## THE ADMINISTRATION OF ANESTHETICS.

(*The British Journal of Dental Science, London, July 15, 1909.*)

Mr. Cooper, M. P., supported by Sir Walter Foster, Sir William Collins, Sir John Bean, Mr. Acland Allen, Mr. Barnes, Dr. Vickerman Rutheford, Mr. Bertram Straus and Mr. Carr Comm, has brought forward a bill concerning the use of anesthetics.

Under this measure medical practitioners and dentists applying for registration on or after January 1, 1912, will be required to submit evidence of having received theoretical and practical instruction in the administration of anesthetics, and any person not a registered medical practitioner or dentist will be prohibited from administering an anesthetic except under the immediate direction and supervision of a registered medical practitioner or dentist, or if the circumstances attending the administration were such that he had reasonable grounds for believing that the delay which would have arisen in obtaining the services of a qualified person would have endangered life.

In the case of persons dying under an anesthetic, doctors will not be permitted to give certificates of death.

---

SOME SECONDARY PHENOMENA IN INJECTION ANESTHESIA.

---

BY DR. C. FRITZSCHE, LEIPZIG.

---

(*Deutsche Monatsschrift.*)

The observations described in Dr. Fritzsche's article refer to injections of 2 per cent solutions of novocaine in combination with adrenalin.

The rapidity with which anesthetics are resorbed by the system is remarkable. Immediately after the injection a slight trembling pervades the whole body, like that from electric stimulus, and a certain heaviness is felt, especially in the lower extremities. These quickly disappearing symptoms must not be confused with the attacks of anguish that occur after overdoses and in certain patients, and which are to be regarded as prodromes of collapse. Apart from these more or less subjective phenomena of the sensory nerves, the motor nerves are paralyzed by the injection and become subject to

the force of gravity. Especially after injections in the territory of the canine teeth we observe the typical picture of a partial facial paralysis. The lip becomes pendulus, and does not return to normal position until after the anesthesia has worn off, *i. e.*, after two to three hours.

Another, though less frequent, secondary symptom, is the appearance of inflammation and abscess, which stimulate parulis. In some cases the injection is followed by a reddening and swelling of the gingivae. After about twenty-four hours the mucous membrane is sharply contracted against the periosteum. The sub-gingival abscess shows very irregular, mostly ragged contours. A gradual transition from the highly mucous membrane to the normal, as in parulis, is missing. The abscess is generally formed, not in the immediate proximity of the point of injection, but near the border line of the anesthetized portion. The hard palate seems to be a place of predilection for the formation of such abscesses.

Two days after the injection the crisis is reached, after which the abscess slowly recedes, generally without spontaneous discharge of pus. After eight to ten days the inflammation disappears. Upon incision a small amount of thick, viscous pus is discharged, and the rigid walls of the abscess do not collapse in the same degree as in ordinary parulis. The pain is very moderate. Chills, fever and general malaise, as occasionally observed in parulis, are not present. The abscess is, however, not always so harmless. In one case, the extraction under local anesthesia of an upper left molar, was followed by extensive gangrene of the gingival, exposing the partly necrotic bone. Another case is cited where extraction under local anesthesia of a lower molar affected with periostitis was followed by the formation of an abscess two days after the extraction, which was not confined to one place, but successively appeared in three different places. The infection was due to the existing periostitis, not to the injected novocain.

In four cases, in which infection seemed to be out of the question, anesthesia was followed by ecchymosis. In three of these cases the injections were made in the region of the bicuspid and molars of the maxilla, in one in that of a bicuspid of the mandible. On the second day after the injection the cheek showed vaguely defined areas of extravasation of blood, the surrounding tissues of which

appeared to be inflamed. The following day these areas reached the size of a silver dollar. These ecchymomæ lasted about a week and appeared as if the patient had received a fist blow.

The appearance of these secondary symptoms following the injection of local anesthetics is very rare, and may occur once in several thousand cases of local anesthetic injections.

---

### A SIMPLE METHOD OF REPLACING A PIN CROWN WHEN THE ROOT IS DECAYED.

---

BY DR. JOHN G. S. ANGUS, L. D. S.

---

(*The Dental Record*, London, March, 1909.)

It sometimes happens that a patient comes to consult us about a crown which has come loose, and on examination we find to our discomfort that not only has the crown become loose, but also that a considerable portion of the root has decayed underneath the base plate.

I have thought of a very simple method of restoring the decayed portion, still utilizing the original crown. I am not quite certain as to the originality of the process, but as far as I am concerned, I have not seen it described before.

In the first place it is necessary to dress away the gum which has grown into the space caused by the decaying of the root. This, I think, can be most successfully done with cotton and sandarac varnish.

This done, a piece of gutta-percha is heated and pressed round the pin of the crown. After further heating of the gutta-percha, the crown is pressed into its original position, and left till hard. After removal the gutta-percha is trimmed up with a hot knife. This is a simple matter, as the gutta-percha takes a very sharp impression of the dimensions of the root. Simple as it is, it must be most carefully done, for the after fit depends in a large measure on this part of the process.

A cast is now taken of this impression in plaster, carefully trimming down to the base-plate. When the plaster has become thoroughly dry, the case is heated sufficiently to permit of the removal of the crown and gutta-percha together. After their removal further heat is necessary to drive out all moisture from the cast. In the mean-

time the pin of the crown has been thoroughly cleaned, roughened and heated along with the plaster cast. Fusible metal is then poured into the space left by the removal of the crown and gutta-percha. The heated crown is then replaced with considerable force to insure that it has been sent perfectly home. On removal after cooling, the fusible metal will be found adhering to the pin of the crown, giving a sharp replica of the gutta-percha. On replacing the crown, it will be found to fit perfectly into all the irregularities of the root. In this way, I think a stronger and more efficient piece of work is obtained than can be acquired by means of building on to the root itself. Another condition in which this method may be employed is when a root has decayed very much under the surface of the gum. The gum is dressed away in the usual manner, and a rough impression taken. The crown is fitted so that the labial portion is in proper position, and finished. No great care be taken of the distal or lingual aspect of the base, beyond the fact that it at least touches the gum in that position. From this point the procedure is the same as in the former case.

---

#### THE ADMINISTRATION OF ANAESTHETICS.

---

(*The British Journal of Dental Science*, London, Jan .1, 1909.)

Although there was much to encourage us in the business lately transacted by the General Medical Council, there was one subject discussed which is calculated to cause us grave anxiety, the Administration of Anaesthetics.

Some few months ago Dr. Frederic Hewitt read a paper before the Medico-Legal Society, the purport of which was that no person not a medical man should be permitted to administer a general anaesthetic, and that medical students should be required to undergo practical training in anaesthetics before presenting themselves for their final examination. The principle of Dr. Hewitt's paper was approved, and a resolution to that effect was forwarded to the General Medical Council, by whose executive committee it was adopted, with the result that a "General Anaesthetic Bill" is proposed to be presented to Parliament. This bill embodies the two clauses contained in the resolution of the Medico-Legal Society. The first one, to quote the President of the General Medical Council, "practically

prohibited under a penalty any person who was not a legally qualified medical practitioner, administering a general anaesthetic for any surgical or medical operation, act or procedure, or during any childbirth." The executive committee desired the council to approve that principle, and on the motion of the president this, the first part of the executive committee's recommendation, was carried. The second part of the bill was regarded by the Medical council as interfering with its prerogative of ensuring that every student was adequately equipped to practice. Moreover, the council has already issued a memorandum urging the licensing bodies to require specific instruction in the administration of anaesthetics.

To this second clause of the bill we have nothing to say, except that medical hospitals are only doing now and under pressure from the Medical Council that which dental hospitals have done, and done efficiently for many years. But with respect to the first clause, we consider that the Medical Council will not treat us fairly, if the proposed bill does not contain a clause permitting the registered dentist to administer nitrous oxide gas. It is an anaesthetic peculiarly associated with our profession, the deaths from which, if proved, have been so small in number as to be practically *nil*; one in which every dental student has had sufficient experience in his daily hospital life to enable him to administer in his practice with skill and confidence, and lastly, one which thousands of dentists for many years have used as part of their daily avocation with benefit to their patients.

We hope that if any clause such as we suggest has not been inserted in the bill that representations will be made to the Medical Council, and especially to Mr. Charles Tomes—whom we are accustomed to regard as our representative, although he is not strictly so, but is a Crown nominee.

If our protest is unavailing we shall certainly exercise every legitimate means in our power to maintain our rights, and retain a custom which not only safeguards the public, but which in many cases is to their monetary advantage.

---

#### SOOTHING DRESSING.

(*Journal Odontologique de France*, Paris.)

In cases of chronic or acute pulpitis excellent results may be obtained by applying a cotton tampon saturated with a solution of tincture of iodine, eucaine, and cocaine in equal parts.

# ORIGINAL CONTRIBUTIONS

## TOOTHsome TOPICS.

BY R. B. TULLER.

Bunkumhurst, July 10th, 1909.

We are stil at Bunkumhurst, an' the roses ar a bloomin' (or hav ben) everywher—but heer.

Never mind; ma hez planted some climers to gro up over each corner of our bungaloo an over the door next summer—if they's going to be enny next summer at Bunkumhurst. Of course, you never can tel; the boom it hain't growd mutch so fer. Ma sez pa had a bea in his bunnit 'bout this place an' he got stung. I kno he got stung all rite, as Ile tell later on, an' he's got bit, too. We all did. You see sumboddy (Italians) lived heer fore we did, that wuz evidently careless 'bout some things, fore this wuz a bungalow. It uster be jist a common shanty until we got it an' renamed it. We smokt it out an' whitewasht it; but i gess we didn't smoke it e nuff. We found that out when the nite cum on an' ma hatter lite a candel to see what wuz doin'. Say, ther wuz a army that wuzent flys ner moskeeters.

When ma got her candel lit, she sed, "Mercy full goodness!" An' then she got her swatter what she swats flys wit, an' she begin to swat the bed, an' pa, an' all around, and every swat left a strawberry mark. She got pa out, an' he got a slipper, an' them two made a noise like me when Ime beatin' our turkish prayer rugg with two sticks. Then ma'd see sumpen on pa an' she swat him an' he seen sumpen on her an' he swat her wit the slipper. The more they seen, the more they seen; an' if I hadent been scratching and slapping to beat em both, I think I shoold a laft som to see the swatting match. Ma'd say, "There's one!" an' slap pa, an' he'd say, "There's a nuther!" an' slap back. When to'rds mornin' we all got tired out, we went to sleep in red poky dot nite geer an' sheets. Ma sed if it wasen't for ruinin' pa's pipe dreem, she wood name the place Bed Bug Roost; an' enny way, if it was goin' to keep up long this way,

she'd take me an' go back to Chicago. But we cant go back until Sept. 1, cause we rented our house til then.

But pa he don't loose no curridge yit; an' so he gits ma an' me out every day or so an' smokes the bugerloo again good an' plenty. But ma sez they seem to cum agin out of the ground. They dont like the whitewash as well as other places; but some on 'em air bold e nuff to come paradin' out in the day time, an' between them an' the flies ma has got to have a new swatter.

One day when pa had ma an' me out under the tree near our mineral spring (what we are bankin' on to make this a fashunable watterin place), an' pa was smudgin' out the bung-a-lo, an' smoke was pourin' from every vain, the first thing we kno, a passin' tug in the canal pusht up to the bank and began to souse the "bung" wit a big stream of watter. After they had got off all the whitewash and busted in all the skeeter nettin' at windows an' doors, they found out it wuz a false alarm an' quit.

Pa tries to enthuse over the prospects of Bunkumhurst, an' I heerd him tell a man one day, when we went in town, that there was-ent one skeeter in the place. Pa allus sticks close to the truth, sometimes. Ther aint one; ther is more—bout 111,111,111 an' then some. But who sez we are not havin' a lovely summer outing, huh? Pa sez we are havin' just as mutch fun as other people who go for outings leveing nice comfertable homes to go sum wher an' liv neer natur, an' neer skeeters, an' bugs, an' wurms, an' crawlin' an' bitin' things, an' wild things; an' run wild an' barefoot themselves, an' git tan an' frekuls an' wet an' dry, an' think they ar havin' a whoopin' up good time. Ma sez it is change, an' she's bout reddy fer more change.

Pa he is all the time figgerin on the profits on the land, an' the bottled water which ar, he sez, bout ninety-9 per cent. When it is not too hot in the sun, he goes about pacin' off the ground an' figgerin' how the streets will run, an' where the postoffice, an' city hall will be, an' the bottlin' works, an' wher the big hotel will be, an' wher Bunkum Block will be; also, where the bung tung will have their cottages an' bungalows, an' wher the 5c shows an' the merry-go-round an' such things will be located, so as not to mix up too close to the buntung & c; an' the way he keeps his pipe goin' is like a engine with a big load goin' up a steep grade. Sometimes his

wheels slip same as the engine, an' go chasin' around mighty fast. As fer in stance, there is notholes in our house neer the roof, an' one day ma discover that some wasps, er hornets, had bilt a nest rite in the house up in the gable; an' it was as big as my cap. She tole pa to stick a stopper in the hole an' take it down an' drown it. So pa he went up on a step ladder an' stopt the hole, keepin' the bunch in; but he didn't figger that sum mite be out foragin' and lible to come home enny minit, which they did an' done sumpen to pa which knockt him clean off the step ladder, an' bust the nest, an' then we *all* hatter git out. That wuz where pa was stung that I kno of. Then he hatter smoke them out with a face lookin' like a prize fiter what got the wust of it. Oh, there ar lots of exciting as well as biting things in the country.

When pa ain't pacin' off the blocks an' figgerin' the city out that otter cum, he keeps bizzy movin' his chare around the bungaloo to keep in the shade; an' tells ma that when the hotel is bilt we'll all bord there, an' will have the best that Bunkumhurst can afford.

"Yes," ma sez, "we are havin' that now—an' the wust sum too. I suppose this is going to be (in your pipe) the Sarytogy of the West. Go on smokin', Joel; we can't go back til September. Smoke up."

---

#### TO PREVENT DISCOLORATION OF TOOTH.

If you want to avoid discoloration of a tooth when it is necessary to remove a pulp, by pressure anesthesia with cocaine, after the application of arsenic, wind a little cotton on a small smooth broach, moisten well with Veo's remedy; as soon as pulp is removed from root with barbed broach, carry the broach with Veo's remedy to the end of the root canal, untwist the cotton so that it will stay in the root. This will *prevent any bleeding*, consequently there will be no discoloration.

If there is any soreness to the tooth this remedy can be left in for weeks if necessary. The soreness will pass away in a day or two, When you are ready to fill root canal, wash out pulp chamber and canal with alcohol, and you will have a clean cavity. When root is filled with ox-chlorid of zinc the tooth will not change color.

JAMES H. PEMBERTON, D. M. D.



## RECENT GRADUATES

### COLLEGE OF DENTISTRY, UNIVERSITY OF ILLINOIS.

Rose Aron, Willard L. Brown, Payl M. Breyer, Orpha C. Bailey, Richard M. Brumfield, B. A.; Joseph H. Chute, Arthur B. Crawford, Frank L. Cooper, Charles J. Coffey, Walter W. Droberg, Richard F. Feick, Harry W. Garnes, Riwin H. Halferty, Clifton H. Johnson, Masaomi Kunitaga, D. D. S.; Austin Cain Kingsley, Thorleif I. Lerche, Dean Stanley Lewis, William J. McCarthy, Theodore R. Mosee, Louis Newman, Elios Orlow, Theodore W. Schnell, Julius H. Seidel, Maitland V. Shaver, Herbert H. Stuart, Matthew A. Teeling, James E. Waterhouse, John Caldwell Williams.

### CHICAGO COLLEGE OF DENTAL SURGERY.

1909 Graduating Class of Chicago College of Dental Surgery, Dental Department, Valparaiso University:

Chas. E. Anderson, Emil A. Anderson, Olaf Aas, Norway, H. G. W. Ball, Joe E. Bennett, C. Biermann, Fayette Biglow, R. J. Blake, Bernard Bramm, E. E. Breaks, Emit Browning, A. D. Burne, E. O. Caine, J. H. Calhoun, Marshall G. Cary, J. Cottard, E. L. Cox, Ernest B. Croxen, C. W. Currie, T. B. Day, M. Diratsonyan, H. F. Doring, John S. Dreher, J. H. Dumont, S. Eitingon, W. A. Erickson, J. M. Everly, Fred R. Felcher, T. Fukui, J. P. Garriott, B. Gawron, Jas. P. Gorman, J. S. Gorden, Thomas Goldberg, O. A. Goldstein, Winfred E. Henshaw, C. S. Helm, Harvey H. Hoy, L. L. Hopkins, Scott W. Hoyt, Richard M. Hubeny, A. W. Imberg, B. F. Johanson, I. Chester Kintzer, Elbert W. King, J. L. Key, R. G. Knoff, C. Lane, Adelard J. Lemieux, C. H. Lowe, Ralston I. Lewis, Evert J. D. Lorgion, Frank E. Ling, W. B. Lawrence, O. J. Monson, K. Miner, W. G. Mitchell, W. H. Murray, Jacob L. Neymark, Clarence N. Newlin, James H. Pearce, T. I. Robb, Chas. Ruff, E. F. Reischaeur, J. A. Rilling, Julius P. Roslyn, Percy Rutterford, Wm. B. Ruddick, A. L. Rennie, G. W. Sherman, Geo. W. Smith, Maurice Straubbe, E. I. Stewart, J. D. Stockwell, Thomas E. Turner, C. M. Turman,

E. G. Vance, A. D. Vance, Carl Vansant, Verner W. Watt, Glenn P. Walker, Seely C. Wood, E. Werntz, Nathan J. Zoline.

#### INDIANA DENTAL COLLEGE.

The Thirtieth Annual Commencement exercises were held at Caleb Mills Hall, Indianapolis, at 8:00 P. M., Tuesday, May 25, 1909. The following were graduated: J. F. Applewhite, Harley Bish, E. H. Blake, F. B. Bridges, J. L. Brown, Inlow Burton, H. G. Cain, J. R. Carnahan, H. W. Cawley, I. M. Coogle, Walter Cowan, C. W. Doyel, J. K. Duff, W. E. Garritson, S. J. Grossnickle, J. H. Hardwicke, Victor Helgeman, F. E. Hill, O. E. Hite, R. H. Hopkins, R. M. Hubbard, Douglas Hunter, E. M. Hurst, C. T. Johns, A. R. Millian, J. H. Kraning, J. Kreutzer, R. N. Luse, W. L. McMurray, Carl Magnuson, Edward Martin, Harry Mayer, C. A. Meeks, E. W. Montgomery, C. E. Morgan, E. C. Oberdurf, R. H. Richardson, E. F. Riddell, P. J. Ritchie, G. W. Rodger, Pearl Russell, F. W. Seidel, Geo. J. Smith, H. Stephens, H. C. Tolliver, G. E. Weir, W. J. Wilson, W. W. Woodrum, E. E. Young.

#### LIST OF GRADUATES, NORTHWESTERN UNIVERSITY DENTAL SCHOOL, JUNE 9, 1909.

Albert Edward Bergquist, Iowa; Oscar Theodore Bergum, Wisconsin; Axel Bernhard, Illinois; Joseph Bernstein, Illinois; Carl Louis Bertram, Ohio; George Montgomery Blair, Jr., Illinois; George Francis Blaylock, Kansas; Edwin Hoffman Botkin, New York; Carver Rollins Brown, New Mexico; Thomas Perry Bullard, North Carolina; Wesley Pierson Burke, New York; Laurence Allen Cates, Iowa; Earle Armour Clevidence, Nebraska; Christian John Dahle, Wisconsin; Albert Victor Dallow, Australia; William Thomas Dawson, Illinois; Louis Henry De Krauze, Russia; Frank George Desmond, Wisconsin; Ernest Oscar Dietrich, Iowa; Oscar Dietz, Wisconsin; John Francis Dillon, Illinois; John Kirkwood, Donaldson, Iowa; Michael David Donovan, South Dakota; Herbert Lewis Eggers, South Dakota; Ernst Sune Ekstrom, Illinois; John Frederick Fietsch, Illinois; Roland Harry Hudson, Wisconsin; Ernst Carl Theodore Huttman, New Jersey; Lawrence Lafayette Innis, Louisiana; Gareld Bosworth Jensen, Wisconsin; John Marius Jessen, Illinois; Sherman Peter Johnson, Oregon; Willard

B. Johnson, North Carolina; William Fred Kallaus, Iowa; Morris Mayer Kerr, Illinois; Mary Elizabeth King, Illinois; Theodore Stephen Kral, Iowa; Archie Clayton Laing, Ontario; Stanley Douglas Christy Lee, Australia; Elmer Victor Lindberg, Illinois; John Eugene Long, Iowa; Arthur Garfield Loomis, Illinois; James Edward Lucia, Wisconsin; Charles Duncan McBean, Washington; Ellery Ashley McDonald, Michigan; Edward McGovern, Wisconsin; Charles Weimor McKenna, Nebraska; Augustus Arvis Marquess, B. A., Arkansas; Albert Roy Messick, Indiana; Jacob H. Miller, Illinois; Arthur Reginald Mitchell, Washington; Norman Lambert Mitchell, Barbados; Walter Arthur Moore, Washington; Carl Victor Nickerson, Illinois; Lucian Leo Noyes, Utah; Thomas Guy O'Hara, North Dakota; Sigurd Harold Ohtness, South Dakota; Charles Moreton Olson, Australia; Ralph Eugene Penney, Washington; Leon George Phillips, Illinois; Edward Rollo Pihlfeldt, Illinois; Robert William Reed, Nebraska; William Edmund Reid, Michigan; Evan Greene Richards, Utah; James Henry Ross, Illinois; Oscar Sandstrom, Wisconsin; Milton Dale Schwartz, Illinois; Cyril Sharp, New Zealand; William Edward Snow, Illinois; Leonard Clay Snowden, Texas; William John Stiehl, Iowa; G. Guy Stirling, Illinois; Roscoe Leaton Stout, Illinois; Corliss Samuel Toay, Wisconsin; Louis Llewellyn Vosper, Ontario; Hans Walder, South Dakota; Lee Roy Walston, Illinois; Charles Henry Welter, Indiana; Norman Walter White, Australia; Paul George White, Illinois; Joel Osgood Wilder, California; Louis Clarence Winzeler, Ohio.

---

#### NON-INFLAMMABLE CELLULOID.

"Zellir," according to the *Drogistern Zeitung*, is a celluloid acetate, which dissolves in acetic ester and camphor, giving plastic masses with the latter that can be rolled and moulded into various objects, just like celluloid. Dr. Eichengruen, who has prepared this compound by acting upon cellulose with acetic acid, finds that it can also be worked up with non-inflammable substitutes of camphor, yielding a mass which possesses not only all the valuable properties of celluloid, but others as well. Thus it is possible, according to the manipulation, to obtain substances that are soft and flexible as leather and cloth, are elastic, as India rubber, but perfectly transparent, absolutely impervious to water, and non-inflammable.

## ABSTRACTS AND SELECTIONS.

### SEEN THROUGH PATIENTS' EYES.

Do the majority of dentists realize the impression they create before they are seen?

Judging from the number of slovenly, ill-kept offices it is safe to assume that some of them never give the matter a thought.

Just why this is so is a source of conjecture. But it does seem that an intelligent man starting in any kind of business would take into consideration every detail of whatever business or profession he had in view.

The dentist wishing to locate may be a man of means or otherwise, but in either event the same rules apply: Cleanliness, first-class work, up-to-date equipment and clear-cut business methods.

We will suppose a stranger in a city or town needs the services of a dentist and is not recommended to any one, is it not reasonable to presume that he or she will select a clean, attractive-looking office in preference to one reached through a dingy, dirty hall and stairway?

Some dentists cannot afford to have an expensive office, but every dentist can have a clean one no matter how small the office or unfashionable the locality.

Patients get their first impression on entering the hallway and outer office; if these are immaculately clean the first step into their confidence is taken. But this is not all by any means. The inner office or operating room must reveal a man just as immaculately clean as the office itself; he must be well groomed in every sense of the word, his close physical contact with his patients demands it; there is nothing so obnoxious to most people as the odor of perspiration, or a breath reeking with alcohol, stale tobacco, bad teeth or a disordered stomach, and it is absolutely essential to eliminate them if the practitioner is to have any degree of success.

It is also essential to have a first-class, up-to-date equipment. Some dentists maintain it is not necessary; however, that may or may not be true. But close observation has proven that it does inspire more confidence, admiration and boasting than antiquated furnishings, and

if a patient has confidence in his or her dentist they usually go out of the way to recommend him to their friends and acquaintances, which means the practice is sure to increase.

On the other hand, regardless of how capable a dentist may be in every branch of his profession, he will never attain any great success with obsolete equipment and uncleanness, because nothing will drive patients away quicker than fear of a clap-trap, rattlely foot engine or a stagnant, unsanitary cuspidor.

If instead of occupying so much of their time wondering why patients do not keep appointments, continually grumbling and complaining of business being bad, they pay some attention to keeping themselves and their offices clean, well ventilated and modern, the importance would soon be realized in increased patronage.

The utmost privacy in an office cannot be too strongly advocated, as most patients, being human, have a tendency to give vent to their suffering during an operation, yet are humiliated by the presence of disinterested parties. Or they may wish to refer to their account, yet do not care to discuss it before a third person. Again, if a little more consideration were shown patients and they were seen immediately upon entering the office instead of having them wait an unlimited time unnoticed, it would often prevent them from becoming nervous or going away.

Therefore, cleanliness from the ground up, modern equipment and consideration of patients, combined with conscientious work, are the best of all impression-creators and practice-builders.

#### EXPERIENCES WITH CITY DENTISTS.

To editor of *Dental Digest*: May I, an outsider, be permitted to contribute to the *Digest* my views as a patient with the earnest hope that they may be of help to some dentists?

For the past three months I have been suffering from a tooth with a bad root condition, which has caused me to spend much time at my dentist's, and many days I have had to wait for him. On these occasions it has been my custom to read some of the periodicals always at hand upon his center table. In looking over the *Dental Digest*, I read "The Value of First Impressions to the Dentist." I then became much interested, for I was a patient, and as such I have had some strange experiences; so I thought by relating them to you, pos-

sibly they might convey a gentle little lesson to those in need of such. Dr. Brush asks, "Have you ever wondered what were the first impressions of a new patient upon meeting you in your office? Are you sure you would like these impressions to be the lasting ones?" "Do the surroundings and incidentals that create these first impressions convey just the ideas that you would like impressed upon patients that visit you for the first time?" I think I can answer, from one patient's viewpoint, if you will permit me to relate my experiences with two or three dentists I have had the misfortune to meet in their offices once and *once only*. Could those men know what impressions they made upon your humble servant (and others), surely they would change their ways and surroundings.

My first experience was about ten years ago. I had a toothache with no decayed tooth that I could see. But the ache was there all the same. I had no preference as to a dentist, for I was a stranger in New York, but a friend advised me to try some one, who, it was said, had been very successful with a friend of hers. "Then you have no personal knowledge of him?" I asked. "No, only what I heard; but I will inquire and let you know, for there are dentists and dentists." A few days later I received the following information: "For goodness' sakes, don't go to Dr. R——. I make a mistake. He is simply awful. He did not do her work at all; it was some one else. She did call upon Dr. R—— for an appointment; she never made one, and for the following reasons. She found he had two small offices, a front one and a little stuffy back one for a waiting-room; this was overfull with all kinds of broken-legged chairs, and a sofa with frayed-out cushions upon it; the floor was covered with a greasy-looking carpet and up in one corner was stored a sewing machine; the glass over the mantel was so thick with dust that you never could have seen your face had you tried. K—— says she would have backed out on the impression already received from the general appearances, but he had seen her enter and she knew he would hail her as she passed. Presently he let out his patient, telling a little girl to take the now vacant chair. K—— made a motion, but with rather a grand air he waived her back, saying, 'I will see you in a few minutes,' while he looked at a letter which laid on the dusty, grimy-looking hall table, after which he rubbed his eyes, scratched his head, ran his hand through his beard, and, without washing his hands, made an attack on the little girl's mouth. That

was too much for K——. She stole to the door and fled. So you see you do not want to go to *him*." I did not, indeed.

I heard incidentally that there was a very clever dentist in Brooklyn, "rather eccentric, but a good dentist." I went. As to his eccentricity, if what I saw passed for eccentricity, he was eccentric, indeed. One look as he came forward in a greasy, half-worn Tuxedo coat, very dusty and crumby from a late breakfast, sufficed for me; but the position was awkward; I had to make an appointment, and while he looked over his book, which seemed to have plenty of open dates, I took stock of his "eccentricity"—dirty finger-nails, hair long and rumpled, soiled collar and cuffs, the latter much frayed out, an unsavory spectacle altogether. To make it worse, he was crunching something. I had noticed, too, whilst waiting for him, that the same towel used by the first patient was transferred to the second. I made the appointment, but I never kept it.

Later I found a dentist quite up in every way to my standard, and I think there are more like him. This man has two large offices, his own little office, also a smaller one, where a patient can rest while a filling is drying without having to go out among the waiting people (and, by the way, he never has a crowd waiting. Does a dentist who keeps his engagement book straight need to keep his patients waiting? I do not know; I should think not; my dentist has but a few waiting, and I happen to know that he has a lucrative practice). The floors of these offices are waxed and shining; the centers are covered with good, but not expensive, rugs; there are a number of comfortable chairs—several of them are rockers—a sofa, *not* a couch, in each room (the couch is in the little office and is covered with linen crash, as also are the cushions that lay on it); there are several tables, upon which you will always find pleasant reading matter, including the daily papers. There are a few very attractive engravings on the walls, and mirrors over the mantels.

Behind a screen in the back room is a small table over which hangs a glass; a pincushion and some hairpins lie on the table. There is no brush—for who would use the "house" brush for his hair? Clean shades cover the clean windows and over them, spotlessly clean, dotted muslin curtains hang. Delicate white mull sash curtains are also hung before the lower window panes in the operating office. There is a young girl, very nice, very sweet and clean looking,

in attendance, who removes everything that is unpleasant as soon as each patient vacates the chair, so that the next one shall not see what she has to go through. All is perfectly clean; the towels are sweet smelling, and every patient has a fresh one whether the last one used is soiled or not.

My dentist is not handsome, except in the sense of "handsome is as handsome does," and in this light he is par excellence. He is what one would call wholesome looking. He *looks* clean; his hands and nails are all that they should be; he wears a mustache, but no beard to tickle your ears, eyes and nose as he works; in this, as Dr. Brush says, he has "a financial asset." He wears "white duck coats," and he does not need to hang out the "diploma" in the waiting-room; he carries his credentails always with him—in his face and manner—they show that he knows his business. Much of this has been possibly acquired by study and a desire to please; to do his best for his patients and by so doing he has done well for himself.

You say to him, "Doctor, will it hurt much?" With a pleasant smile he will answer, "I hope not, but I can't promise. I'll be as gentle as I can." And you have confidence in him, and if he does hurt, you bear it, and feel that he has done the best he could. I think a patient would rather know what there is to bear than to be assured that it will be merely a "pin prick," and then receive a jab that will nearly make one cry out "murder" (and I know this has been done). In short, he is just what a gentleman of my acquaintance says he is: "A blankety nice fellow all through and knows his business from A to Z."—*Digest*.

---

### MODERN VIEWS IN THE TREATMENT OF CHILDREN'S TEETH.

---

BY CHAS. HALL.

---

The true statesmen of every country is concerned at the tremendous mortality of the human race during childhood; numerous legislative enactments sufficiently show how the condition is recognized as capable of amelioration. But statistical returns are seldom affected by legislation where deep-seated ignorance is the main cause,

---

\*Read before the Northern Dental Association of New South Wales.



and where there are, as in this instance, such a vast complexity of reasons. It seems absurd that in our own state we are spending large sums of money in introducing immigrants to our shores, while right here we give scant attention in a scientific way to those who are our native born. It is true that of late years a great advance has been made in the elimination of intestinal diseases formerly due to improper and unscientific feeding of infants. The recognition of the value of sanitation and general hygiene also has had its effect for good, but a vast amount of special hygiene is necessary before the full measure of life's chances can be assured to our little ones. First of these details of special hygiene should in my opinion be the care of the mouth and teeth. The "vestibule of the body," subject as it is to endless invasions of pathogenic bacteria, seems generally to receive the scantiest of attention from the public, the medical profession, and, in the case of young children, I might also add—the dentists. Yet how important is this portal to the human frame—in childhood especially, both by reason of the fact that nourishment enters the body by that means, and a considerable portion of the air breathed, rightly or wrongly—perhaps I should say wrongly at once, also enters that way. Added to all this, if the teeth are painful—the broken rest and nervous strain, indeed leaves a system too shattered to offer much resistance to attacks of systemic disease. Nor is this all: The coveted condition of immunity to caries, to attain which our best efforts in operative dentistry are directed, must be considered continually, and striven for during the early years, if we may reasonably hope for success. Dr. Black says, *"immunity to dental caries which may be complete, or which may approach completion, even in persons who, as children, were very susceptible to caries, will become established in every adult life in the larger proportion of cases in which effective protection has been given by filling operations, by continuance of active mastication of food, and reasonable care as to cleanliness."*

It is the primary decay in the deciduous teeth that unattended, passes its measure of infection to others and brings the mouth into the worst possible condition for the eruption of the permanent set. Consider the agony involved, the peevish temper, and last, but not least, the gastric disturbances, due to the swallowing of fetid debris crowded with micro-organisms from about the decaying teeth. Often

have I heard the fond parents planning to give their child the change of air, which perhaps the physician has ordered, and I have wondered how they could expect the child to benefit with a mouthful of decaying teeth to vitiate every breath. For it is useless to close our eyes to the fact that the majority of children breathe through the mouth.

For all practical purposes we may consider caries of the teeth as a contagious disease, although its degree of infectiousness has never been defined. It certainly does affect adjacent teeth in the same mouth, as witness the frequency of approximate cavities (but it is conveyed to others), and the fact that the same tooth on the opposite side of the face is frequently affected (that teeth practically decay in pairs), opens up a wider field of study that can safely be considered within the limits of this paper.

At the earliest possible age the teeth of the child should be attended to by the dentist, and diligent search made for the slightest manifestation of decay; which should be treated and filled with copper amalgam or oxyphosphate of copper cement. It is not too early at two years of age to examine the child and address instructions on the value of oral hygiene to those that have charge of the up-bringing. At this stage fear as a rule is absent—certainly dental fear—and a habit is engendered which lasts through life, if at suitable intervals the little patient is brought along for treatment.

At first it is usually only necessary to see that the teeth are clean and to make such notes as may be of future value. The difficulty of the first sitting is the flow of saliva, and the inability to arrest the wandering mind of the patient, for such a length of time as will permit of an examination with a mouth mirror. Not only should the teeth be examined and charted, but as much of the oral cavity as possible besides should be observed—so that even though healthy the general appearance be noted, with the result that at future sittings any departure from normal may be quickly observed. The mucous membrane itself is very liable to disease from various causes. Farinaceous food, which forms such a large proportion of the child's diet, is prone to stick about the teeth and ferment, giving lodgment for the bacteria, forming lactic acid, which we know to be a solvent of enamel. Milk itself does not appear to be destructive, but starchy foods with or without milk seem a wonderful medium for the proliferation of acid forming bacteria. In order to overcome this it is

wise to order the child's teeth to be brushed with a mild alkaline wash—a little soda-bicarbonate in water, sufficient to make it faintly alkaline, or better still, milk of magnesia—and if this is done after meals and before going to bed the effect is very satisfactory and the teeth appear to harden under the treatment; this should be of a mild dilution and not sufficiently strong to nauseate. Green stain must be removed by the engine brush or orange wood sticks dipped in flour of pumice, wetted with peroxide of hydrogen, and alkalized with soda bicarbonate. Tincture of iodine as a preliminary measure accelerates the removal of green stain. The alkaline brushing will usually then keep it clean, but if the green stain fungus has been left for such a length of time as to have caused a roughened enamel surface beneath it—then after its removal the surface must be carefully polished and a burnisher run over it. .

Where caries first occurs is usually on places that have faulty structure or where food accumulates, and it is the earliest manifestation of caries that it is most important to attack. The first class of situation is easily dealt with by excavating or removing—preferably with hand instruments—the adjacent portion of the tooth which is diseased, and placing a metal filling. But if this is not possible the black cement—oxyphosphate of copper—is of great benefit. This cement hardens rapidly—is hydraulic—and seems to have therapeutic properties of no mean order, it is also very adhesive; properties which commend it in the treatment of children's teeth. On the other hand, while more compatible with tooth structure than any metal, it must be understood that it—like all cements—is subject to wear. Not that this should prejudice its use, since I have often noticed that while the black cement itself gradually wore away, or was dissolved by the oral fluids, yet the last thin layer clings to the walls of the cavity and preserves it; while in the case of metal—it is not the filling that wears, but the cavity margins—the tooth structure itself decays. Thus all the evidence which I can gather goes to prove that oxyphosphate of copper is far and away the best material for filling children's teeth—but like everything else it has its limitations. In the front of the mouth its appearance is not in consonance with accepted ideas, and ordinary white cement of the hydraulic setting variety may be used—although the dark color of the copper cement is limited to the surface of the filling; in other words, it does not

particularly discolor the tooth—as does any amalgam, in children's teeth. In cavities on the occlusal surface of posterior teeth, where the force of attrition must be provided for, it is advisable to have some good copper amalgam ready and plastic, and after drying the cavity line with oxyphosphate of copper and immediately fill with the copper amalgam. This in a young subject is difficult to do—as what with the moisture and the rapid drying black cement it is not easy of accomplishment—but it is possible; and after a while one becomes very expert in this as in other operations. If the cavity is deep I always endeavor to, after drying and before filling, paint over with a coat of varnish to prevent the acid from irritating the pulp, but this is quite a remote chance with copper cement on account of its rapid setting action.

In bad cases, whether through neglect or some constitutional or inherited weakness, the condition must be studied and dealt with intelligently. We all know the constitutional case in which perhaps every tooth becomes denuded or partially denuded of enamel almost as soon as erupted, leaving a peculiar brown color of varying degree, with perhaps just the tips of the incisors left of white enamel. Naturally, if left to nature these teeth rapidly disintegrate, and, at say, three years, are merely a mass of blackened, putrescent stumps, a menace to the health of the child. Such a severe case—and I am sorry to say there are many of them—demands heroic treatment. As soon as the condition manifests itself, it should be met by a treatment with nitrate of silver, and the parents informed of its blackening character beforehand. Usually it is well to effect this in a number of appointments, as it is difficult to avoid the caustic salt invading the surrounding mucous tissue. Also precautions must be taken to insure that no portion of the nitrate is swallowed. This, however, is not so difficult as at first sight would appear. Nitrate of silver, being a coagulent, does not spread far, and of course it should always be used thoroughly dissolved and applied on a piece of cotton or asbestos, or a minute portion fused into the end of a silver probe to apply directly to some special part. Of the nitrate solutions, that advocated by Dr. Theo. Shanasy, of Adelaide, is far and away the best—the deposit of silver being almost immediate. In order to minimize the danger of destroying mucous tissue, a roll of cotton wool or better still a strip of soft cambric which has been dipped in

white of egg or other form of albumen may be employed to lay along the buccal sulcus. The result of such a nitrate treatment is an immediate arrest of the destructive condition and the conservation for a further period of the masticatory function—but the teeth present a very unsightly appearance. The treatment requires renewal at intervals.

If the case is one of neglect; instances in which caries of the teeth have been allowed to progress so far that the bacterial invasion has involved the deciduous pulp, a very grave condition results. If the permanent tooth is just beneath and about to erupt—extraction is advisable, but if, on the other hand, some years will elapse before the permanent will take its place, measures should be adopted to treat the disease. If the pulp is exposed it will probably be hyperaemic and consequently anodyne and mildly antiseptic treatment is necessary, and it should be kept under observation by a temporary filling, to be replaced, all being well, by a capping of oil of cloves and zinc oxide, covered with oxy copper if on a wearing surface, or the whole filling may be of this excellent material. In putrid cases, where the pulp is dead, the canals must be thoroughly cleansed and rendered aseptic, and then may be filled right up of the same material. If the condition is one of abscess, the practitioner must decide whether the disturbance to the child's functions of rest and mastication may not best be met by a prompt extraction, but always remembering the value of the deciduous teeth in conserving and promoting the space for the permanent ones to erupt in.

Let me here accentuate the importance of mild anti-acid, or neutral treatment. Avoid in the young the exhibition of those powerful antiseptics which in adult subjects, even, are often used to excess. Nature provides the mouth with a delicate mucous lining which is being constantly renewed and as constantly bathed with a cleansing saliva. Do nothing that would tend to destroy or injure this, as antiseptics are liable to do—but confine your attention to assisting the functions and repairing or preventing the ravages caused by our modern style of living.—*Commonwealth Dental Review*.

## COMPLICATIONS AND ACCIDENTS FOLLOWING TOOTH EXTRACTION.

BY CLYDE DAVIS, B. S., M. D., D. D. S., LINCOLN, NEB.

DEAN LINCOLN DENTAL COLLEGE, ASSOCIATED WITH THE UNIVERSITY OF NEBRASKA.

[Written for the *Medical Brief*.]

## EXTRACTION OF WRONG TEETH.

By studying the nerve supply of a tooth and bearing in mind that only sensory fibres supply the tooth, and that there seems to be a lack on the part of nature to convey to the tooth pulp the power of differentiation and location, you will see that it is easy for the patient to direct the attention to a tooth which has formerly ached or in which there is a cavity. The tooth may be far from the seat of the trouble. So when a patient points out a certain tooth, never extract it until a thorough examination has been made of both upper and lower teeth from the median line back, on the side where pain is experienced, deciding which one is most likely to give the symptoms described. Then if in doubt, owing to a similarity in conditions which would cause a similarity of pains, isolate each tooth by protecting the others with napkins, rubber dams or whatever seems most convenient in each case and apply the extremes of heat and cold, most conveniently accomplished with the hot water syringe. When the tooth which is the cause of the pain is reached it will be shown by a return of the symptoms, provided the pulp in that tooth is vital.

When the odontalgia results from pericemental troubles, the tooth will be sore and give pain upon closure of the jaw bringing the teeth in contact with occluding teeth, or concussion produced by gently tapping the teeth with a steel instrument. Owing to the great soreness of the tooth the patient generally has it properly located and will seldom misguide you. Therefore, we are more likely to be misguided in cases resulting from pathological troubles, such as general pulpitis, active and passive hyperemia of the pulp, abscess within the pulp tissue, deposit of secondary dentine and the formation of pulp nodules.

If all practitioners will bear these few suggestions in mind they will not extract the wrong tooth, which is an inexcusable accident in

the great majority of cases and is seldom met with except in the hands of those who have made a hasty diagnosis.

Should you by accident, either through the misguidance of patient or from any other cause, dislocate or remove the wrong tooth, replant that tooth in its socket, when later it will become reattached, and within a few days patient should be referred to their dentist for the removal of the pulp, which, of course, has been thereby destroyed.

#### ACCIDENTAL FRACTURE OF A TOOTH.

This is in some cases unavoidable, as cases present where the remaining tooth substance is not of sufficient strength to remain intact and withstand the amount of strain necessary to sever its connection with surrounding tissues. Again, through abnormal development, malformation and the increased size of the root at or near the apex from exostosis, there are teeth whose largest portion is that most distant from the forceps. At every little advancement the tooth may make toward coming from its socket, the cavity in the alveolar process has to be enlarged just to that extent, and it is unreasonable to suppose that any operator, however skillful, if he meets such cases, can be universally successful without the infliction of great injury. However, if the teeth are grasped well under the gingival border and the forceps are not allowed to impinge upon any part of the tooth covered with enamel, the number of accidents of this nature may be reduced to a minimum. The operator should bear in mind that the fracture of a tooth is far worse as to surgical shock and pain than the removal of a tooth; and great care, deliberate execution of thoroughly studied methods and a steady hand will be found of great value.

#### FRACTURE OF THE ALVEOLAR PROCESS OR BONE.

No tooth which is surrounded by healthy, normally developed tissues can be removed from its socket without slight expansion and in some cases slight fracture of the process at or near the alveolar border; but an extensive fracture which includes not only the process, but some portion of the bone, should seldom occur except through carelessness or the overexertion of force in a certain direction. It is most liable to occur from too heavy labial pressure in the extraction of the cuspid teeth; and the inferior third molars with too direct lingual pressure, possibly in first and second superior molars when

too great buccal pressure is applied. After the extraction of any permanent tooth, always with thumb and finger press or pinch both sides of the alveolar process toward the tooth socket, thereby pressing into place any small portions that may have been moved. Unless they have been entirely severed and the periosteum injured, thereby cutting off circulation, they will unite and become absorbed after the healing. If the fracture is extensive, great care should be taken that it is pressed into the exact position it formerly occupied and its subsequent healing watched with care.

An extensive fracture is very frequently followed, first by great hemorrhage and subsequently by excruciating pain and an alarming amount of swelling. If the part severed from the body of the bone is not cut off from the blood supply it will be united, as in case of any other fracture, being held in its proper position by the overlying soft tissues. If after watching it a few days it is found that symptoms of necrosis have set in, where these are well defined the piece must be removed.

#### HEMORRHAGE FOLLOWING TOOTH EXTRACTION.

Alarming hemorrhage sometimes results from the extraction of teeth, and if not checked may result in death. This hemorrhage generally results from a slight fracture of the alveolar wall, which causes the severing of an artery. It is liable to occur even where there is no fracture. The probability of its occurrence increases upon a constitutional liability to hemorrhage, or what is known in the medical profession as "bleeders."

As a local treatment, tannic acid is recommended by many authors. This is applied by moistening a cotton ball in some disinfectant solution, or even sterilized water, and then dipping the moistened cotton in tannic acid and carrying this to the very bottom of the cavity. If the tooth has had more than one root, each root socket must be treated independently. As an internal remedy, the administration of fluid extract of argot (from 15 to 30 drops) is very effectual, care being taken never to administer it to females during gestation. Holding ice in the mouth is also advised. A contraction of the blood capillaries caused by lowering the temperature decreases the blood flow. Heat may be of great service, applied by injecting water quite hot into the tooth socket, the object being simply to cause a coagulation of the fibrinogen. Persulphate of iron may be used



upon a cotton ball, but in many cases secondary hemorrhage results from the destruction of the tissues and their subsequent sloughing. This has caused almost the entire disuse of this drug as a styptic after tooth extraction. Care should be taken not to mix or allow tannic acid to come in contact with persulphate of iron, as their union forms a solution resembling ink, and great discoloration and injury to the tissues may result.

With bad cases of hemorrhage, after all other treatment has failed, I have always succeeded with the following method: Have previously prepared in a bottle the scrapings of oak-tanned sole leather. Remove a small portion and roll as tightly as possible between fingers into a pellet of the proper size, which will reach the farthest point of the tooth socket. Then another larger pellet is made in the same way and pressed down upon the first, continuing this until the cavity is entirely filled. The moisture in the flowing blood causes an expansion of the leather scrapings, which are thoroughly cured aseptic flesh, and having been tanned with oak bark, are thoroughly saturated with the active principle of tannic acid. The blood will permeate the meshes of these scrapings and form a blood clot which is perfectly tight and hermetically seals the cavity. I have never known this to fail in stopping hemorrhage following tooth extraction.

In a few days the top ball of scrapings should be removed. Do not attempt to remove the entire amount or secondary hemorrhage may set in. With this kind of a pack, Nature seems to understand that she has a substance which she should throw out, and it will be noticed that the pack will gradually be forced up and out by the tooth socket; as this comes up it should be removed at least to the level of the gingival border.

Practitioners who have at their disposal an electric current of ten or twelve volts which can gradually be raised in strength to that voltage, will find that hemorrhage can often be checked by placing the positive pole deep down in the wound. Although the actual cautery is often advantageous in checking hemorrhage, I do not believe it quite applicable to hemorrhage following tooth extraction, as the exact location of the lacerated vessel is obscure.—*Medical Brief*.

## MISCELLANEOUS

### NORTHERN ILLINOIS DENTAL SOCIETY.

The twenty-second annual meeting of the Northern Illinois Dental Society will convene at Elgin, Oct. 20-21, 1909.

An interesting and instructive program is anticipated. A banquet will be served to all members in full membership, guests extra.

FREDERIC H. BOWERS, Sec.,  
Freeport, Ill.

---

### A VARNISH FOR IMPRESSIONS.

Sodium silicate and ammonium hydroxide, equal parts, forms a varnish that is indispensable for plaster molds, impressions, etc., and is inexpensive. For impressions—apply in the same manner as you would shellac. A coloring matter, as carmine, may be added, so that the division line may be readily seen. Separate in the same manner as with shellac. When used on models in flask before packing the rubber the plaster readily separates from the plate after vulcanizing, leaving it clean and smooth.—*T. A. Leach in Review.*

---

### CANAL TREATMENT.

I very seldom attempt to drill out and fill all the roots of the bicuspid and molars, but devitalize, open up the pulp chamber, then open the mouth of the root canals with Dr. J. Leon Williams' triangular treamers, wipe out the same with perhydrol ten per cent, then with a solution, absolute alcohol 1 oz., mercury bichloride 1 gr., and fill the mouths of the canals and pulp chamber with mummifying paste. The Soderbury formula with aristol or iodoform is used and the tooth sealed with the filling the case may require.—*Dr. W. H. Jones in Items.*

---

### OPENING INTO ABSCESSSED CAVITIES.

Within the last few years I have modified my methods of operating on these cases considerably. Formerly I made an incision reach-

ing to the bone, dissecting back the periosteum, opening into the cavity, curreting it out, cutting off the root, and packing it to force the parts away so that granulations might form and fill the cavity and thus bring about repair. I have adopted a different plant, which I know will serve my purpose better. Instead of holding away the overlying gums and overlying periosteum over the bone, I make a funnel-shaped opening, taking away this tissue and leaving a saucer-shaped cavity, and there is no packing required. Granulations will form, the cavity will fill, and repair will follow without any depression in the part.—*Truman W. Brophy in Review.*

---

#### THE NATIONAL DENTAL ASSOCIATION. FOR 1908.

The usual annual meeting of the National was held at Boston, July 28th, 29th and 30th. What did they do?

The essayists essayed, the clinicians cliniced, the exhibitors exhibited, the politicians politiced, the orators orated, the kickers kicked, the chairwarmers warmed, the optimists smiled, the pessimists scowled. These and many other things they did. But what did they do? What was done for dentistry? One thing, which if properly carried out by the National, State and Local Societies will benefit the people more than any one act of the National, yes, more than all previous actions combined. They adopted a set of instructions pertaining to oral prophylaxis, which are to be scattered broadcast for the benefit of the public, and we now, as societies and as individuals, can spread this gospel.

Other important questions were wrangled over, and left in the usual unsettled condition, for future generations to fight over. The Army and Navy bill was unwrapped, and the annual free-for-all, rough-and-tumble wrangle followed. No rules were observed; any kind of a "holt" was allowed. There was a general mixture of persons and personalities, then the remains of the bill were gathered up and laid away for 1909.

The Independent Dental Journal had an airing, was gently shaken up, reinvested in new moth balls, and put in cold storage.

## WITH OUR ADVERTISERS.

---

BY J. L. F.

---

If it were not a paying proposition to advertise in the **AMERICAN DENTAL JOURNAL** would any advertiser use its columns without missing a single issue for eight years?—they would not.

The following have advertised in every issue of the **American** since and including Vol. 1, No. 1, 1902. Dr. L. O. Green, Heyworth building, Chicago, Ill.; Acestoria—College of Dentistry, University of Illinois; Harrison and Honore streets, Chicago, Ill.; Thos. J. Dee & Co., gold and silver refiners, 67-69 Washington street, Chicago; Chicago College of Dental Surgery, 770 West Harrison street, Chicago; Goldsmith Brothers, assayers and refiners, Heyworth building, Chicago; **OFFICE COATS**. There is probably no class of dental advertisers that has given so much trouble to journals and their readers as the coat advertisers. We have no hesitancy, however, in recommending the Office Coat Company to our readers. This company is reliable and always pleases its customers. Send orders to 254 East Madison street and mention the **AMERICAN DENTAL JOURNAL**.

**YOU DO NOT INJECT THIS LOCAL**—Chlora Mentholin has proven its value as a dental medicine and is especially indicated in extraction for children and nervous patients where the use of the needle is not advisable. This preparation was demonstrated in Chicago for several days recently and was successful in nearly every case and not a case of sloughing or other bad after effect. See cover page for ad.

**THE SANITA REFLECTOR**, as its name implies, was designed with the idea of being sanitary. This mirror may be readily and thoroughly sterilized. The glass may be instantly removed from the frame and all parts immersed in any antiseptic solution. There are no places for the bugs to hide in the Sanita Reflector. See page 0 for ad.

**ASCESTORIA** has been advertised in the **AMERICAN DENTAL JOURNAL** in every issue in the eight years it has been published. If this preparation did not have merit it would have passed from the market years ago. Ascestoria has been used and recommended by

prominent members of the profession both at home and abroad and never disappoints a user.

DR. O. J. HAMMERSMITH used his anaesthetic for fourteen years before putting it on the market and never had a single case of sloughing. The anaesthetic contains less than one per cent of cocaine, is effective and will fulfill all requirements of an anaesthetic. If you will send Dr. Hammersmith 25 cents in stamps he will send you a \$1.00 bottle, but only one to a customer, for the purpose of introduction.

LISTERINE PREPARATION.—The Lambert Pharmacal Company's preparations are so well known and have been on the market so long that anything on the subject seems almost superfluous. Their tooth powder, however, is newer than their other preparations but from personal experience and observation we are convinced of its superiority and conscientiously recommend it to the profession and the public.

SOZODONT PREPARATIONS are taking a summer vacation so far as Dental Journal advertising is concerned. Their new ad. will appear in the September issue and they will have something interesting to say to the profession at that time.

DR. ARTHUR E. PECK'S PREPARATIONS are standard in their line and are of great assistance to the dentist in cast work. Many failures are due to imperfect materials and the profession will do well to take advantage of Dr. Peck's personal experience by using his preparations.

STEELES INTERCHANGEABLE TEETH have long since passed the experimental stage and have proved to be a valuable acquisition to the dentist's equipment. By their use a broken tooth from a bridge or crown may be replaced in a moment's time, a record being kept at each depot of every tooth sold. The C. L. Frame Company, Masonic Temple, Chicago, has a large and varied stock of these teeth.

NUVO TEETH.—The invention of Dr. J. N. Crouse and manufactured by the Dental Protective Supply Company, are proving their merit and are becoming popular with the discerning dentist. They are particularly strong and are lifelike in appearance. The C. L. Frame Company carry a full line of "Nuvo" teeth.

CASTLITE.—A combination of metals for inlays and restorations; is strong and durable and will remain bright in the mouth. If you have a tooth socket containing but a shell of a root just coat the inside

with glycerine, force some inlay wax into the root, allow the wax to extend the length of facing, fit facing, remove and trim, and cast directly on facing and cement. The exact adaptation of the Castlite to the walls of the root makes the strongest denture that can be used in a case of this kind.

**TWENTIETH CENTURY TEETH AND CROWNS.**—The popularity of these goods are best proven by the size of their factory and the number of people employed therein. There are more people employed in the Dentist's Supply Company's factory than in any other in the world. Their teeth are sold wherever dentistry is practiced and the test of time has demonstrated their superiority.

**A RELIABLE LABORATORY.**—There is probably no word in the English language more commonly abused than the word "reliable." In the case of the Chicago Dental Laboratory the word may be used in its truest sense, for this laboratory is reliable and prompt and will not disappoint you should you send your cases to them.

(To be continued.)

---

#### GUTHYMOL.

Thymol, added to gutta-percha, makes a very useful preparation for dental purposes. It possesses very desirable working properties, setting slowly and becoming hard. I have used it successfully as a temporary stopping and filling material and to crowd away overhanging gum margins and to obtain impressions of cavities. To obtain a satisfactory grade of guthymol add to base-plate gutta-percha a five per cent solution of thymol and soften the gutta-percha under heat. A mixture of guthymol, oil of cajuput, and a few fibres of asbestos makes an excellent root-canal filling. When ready to fill a cavity add to the required amount of guthymol a few crystals of thymol and spatulate the mass thoroughly, when it will require a degree of pliability which renders its insertion in a tooth-cavity an operation of the simplest character.—*Carlos Zacharias in Cosmos.*

## PERSONAL AND GENERAL

**Bankrupt.**—Dr. C. N. Davis, Faneul, Mass. Liabilities, \$1,929; assets, doubtful.

**Dye-Sims.**—Dr. F. M. Dye of Elmore, Cal., was married June 9 to Miss Grace Sims of Los Angeles.

**Dentist Shot.**—Dr. Evans, a dentist of Alvord, Texas, was attacked and shot by an unidentified person June 20.

**Dental College to Open.**—The Southeastern Dental College, Atlanta, Ga., announces that it will be open early in October.

**Bankrupt.**—Guarantee Dental Company of New York was declared bankrupt June 21. Assets, \$1,356; liabilities, \$6,115.

**Scholberg-Carpenter.**—Dr. M. H. Scholberg, a dentist of Fargo, Ill., was married to Miss Gertrude Carpenter of the same town July 4.

**Doyel-Penn.**—Dr. Perry W. Doyel, a dentist of Crawfordville, Ind., and Miss Florence Penn of New Market, Ind., were married recently.

**Accidentally Kills Wife.**—Dr. A. A. Robeson, a prominent dentist of Marlowe, Okla., shot and killed his wife while cleaning a shotgun.

**Dies From Gas.**—Elmer Hershly of Bucyrus died at his home after several months of illness which is said to be the result of gas administered for extraction.

**Dental Student Hero.**—Albert N. Kellogg of San Francisco was badly burned while attempting to save a woman from a burning house after the rest had escaped.

**Dentists Sued.**—A dental company in Chicago was sued for \$10,000 by a patient who claims that her tongue was so injured that she has not been able to speak since.

**\$25 for a Tooth.**—Mrs. Ida M. Boyer was given \$25 damages for a molar which was broken when she bit a stone which had gotten in some bread she was eating.

**Dentist Wanted.**—The city of Harrisburg, Ark., is sorely in need of a permanent dentist, according to its newspaper, which says there is a great opening for the right kind of man.

**Merger of Dental Schools Discussed.**—Plans for the merger of the Pennsylvania College of Dental Surgery with the University of Pennsylvania are being discussed and are now almost completed.

**Gray-Mick.**—Mr. Dorland Gray, the popular manager of the Harvard Company in Chicago, and Miss Francis Mick, also of Chicago, were married July 7. The American extends congratulations.

**Policeman Pays Dentist.**—When Miss Weidman of New Albany, Ind., was struck in the mouth by a club thrown by William Martain, a policeman, it was decided that the officer must pay the dentist's bill.

**Charity to Fill Children's Teeth.**—The New York bureau of municipal research, as a result of the investigation of the teeth of its public school pupils have about decided to spend \$500,000 in dental work on them.

**Arrested for Working on Sunday.**—A dentist in Boston was recently arrested for working on Sunday, but was discharged because the complaining witnesses, two policemen, only had their teeth examined and no work was done.

**Falls Heir to \$40,000.**—Dr. J. B. Vedder, a dentist of Akron, Ohio, has fallen heir to \$40,000, willed to him by his aunt. Dr. Vedder has been located in Akron for some time and says that his fortune will not cause him to move.

**New Dental College.**—A new dental college, called the Memphis College of Dental Surgery, has recently been established in Memphis, which has as its dean Dr. J. D. Towner. Dr. D. M. Cattell is professor of operative dentistry.

**Dentist Sued for Damages.**—A dental company in Chicago has been made defendant in a suit for damages, the plaintiff claiming that he is threatened with blood poisoning and lockjaw as a result of having an operation improperly performed.

**Dentist Receives Threats.**—Since Dr. Wm. Dehart of Logansport, Ind., found a purse containing \$2,000 and advertised the same, he has received six threatening letters from claimants of the money, two of whom have been arrested.

**Dr. G. V. Black to Investigate Discoloration.**—Dr. G. V. Black, dean of Northwestern Dental College, was called to Colorado Springs to investigate the discoloration of the teeth which have for some time baffled the local members of the profession.

**Pension for Disabled Dentists.**—A fund for old and disabled dentists will probably be created by the Minnesota State Dental Association, which closed its convention June 24. The matter was discussed the closing day and referred to a committee to report next year.

**Stringent Laws in France.**—A new law passed recently in France requires that in order to practice dentistry in that country a dentist must be a bachelor of arts, must have made all of his studies in a French university, and must have completed a three years' course in medicine.

**Patent Tooth Company Incorporates.**—The Aeon Artificial Tooth Manufacturing Company, St. Louis, filed an application for the articles of incorporation July 8. The new company has a capital stock of \$50,000 and will deal in dental supplies besides exploiting a tooth patented by Dr. Case.

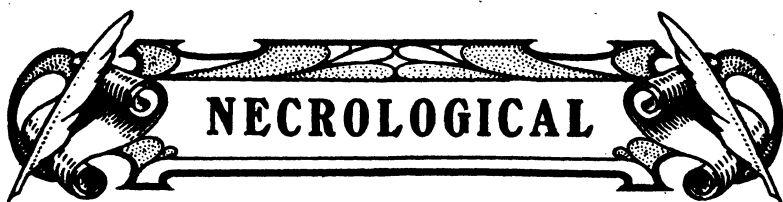


**Endowment Fund for Dental School.**—The announcement of a \$1,000 endowment fund for the Harvard Dental School was made by Dean Eugene H. Smith at the annual banquet of its Alumni. The donors of the amount are the family of the late Joseph W. Smith, D. D. S., a member of the class 1901.

**Time Is Money.**—Dentist—"Certainly, I can pull your tooth, madam. It will cost you \$2." Lady—"Two dollars! Why, other dentists only charge 50 cents." Dentist—"True, madam, but they hurry with their work, while I often spend an hour or more pulling a single tooth. I must charge for my time, you know."

**Robberies.**—Drs. Frank Paddock, Everett, Wash., loss, \$187.—G. W. Patton, G. H. Ham and H. F. Fleming, Minneapolis, Minn., loss \$500.—P. A. Pyper, Pontiac, Ill., loss not given.—J. L. McNay, Oklahoma City, Okla., loss \$50.—Albert E. Voss, Watertown, Wis., loss \$35.—J. Galtin, Minneapolis, Minn., loss not given.—E. W. G. Mihleis, New Ulm, Minn., loss \$40.—Platt, South Bend Ind., loss not given.—C. A. Hintze and R. M. Weaver, Mankato, Minn., loss \$125.—J. W. Toye, Marion, Ind., loss \$159.—R. J. Beaty, Oklahoma City, Okla., loss \$300.—C. E. and J. T. Wardrobe, Milwaukee, Wis., loss not given.—P. J. Brown, C. C. Beeby, W. M. Fancher and G. E. Mason, Racine, Wis., loss not given.—Dr. Sparks, Rushville, Ind., whose office was robbed a year ago, has identified the thief.—E. G. Austin, Kalamazoo, Mich., slight loss.—Dr. Vaughn, Lancaster, Pa., loss \$50.—E. E. and V. P. Perisho, Streator, Ill., loss \$100.—Earl Swan, Lima, Ohio, loss not given.

**Removals.**—Drs. W. A. Merritt, from Central Lake, Mich., to Prague, Okla.—Dr. H. Pray, from East Jordan, Mich., to Central Lake, Mich.—S. L. Owlings, from Hennessey to Herington, Kans.—D. Rathbone, from Plains, Mont., to Dillon, Mont.—H. G. McCormick, from Manhattan, Kans., to Norman, Ill.—C. N. Ralph, from West Point, Neb., to Fremont, Neb.—W. J. Johnson, from Fredonia, Wis., to Kewaskum, Wis.—Heiple, from Thompson, Iowa, to Waterloo, Iowa.—Ralph Clickner, from Morrisonville, Ill., to Bloomington, Ill.—Stowell, from Brookfield, Mo., to Linnens, Mo.—Glen Rowe, from Portland, Mich., to Grand Ledge, Mich.—H. B. Haselton, from Toledo, Iowa, to Tama, Iowa.—L. J. Raver, from Mahanoy City, Pa., to Reading, Pa.—J. Comer, from Versailles, Ky., to Paris, Ky.—L. M. Dixon, from Live Oak, Fla., to Jacksonville, Fla.—G. F. Blaylock, from Chicago to Morton, Ill.—John Long, from Eagle Grove, Iowa, to Bode, Iowa.—Howe, from Peotone, Ill., to Manteno, Ill.—A. L. Anderson, from West Point, Neb., to Blair, Neb.—A. J. Brock, from Clarence, Iowa, to Grinnell, Iowa.—H. G. Brock, from Lone Tree, Iowa, to Grinnell, Iowa.—J. B. Pherrin, from Central City, Iowa, to Des Moines, Iowa.—E. A. McLeod, from Anamosa, Iowa, to Central City, Iowa.—G. R. Wilkrisin, from Prairieburg, Iowa, to Anamosa, Iowa.—Anderson, from Calais, Maine, to Augusta, Maine.

A decorative banner with the word "NECROLOGICAL" in the center. The banner is flanked by two crossed dental instruments, possibly a probe and a mirror, and is adorned with ornate scrollwork and floral patterns.

## NECROLOGICAL

**Dr. C. H. Chambers**, a prominent dentist of Waco, Texas, died of typhoid fever July 9.

**Dr. D. J. Duff**, a well known dentist of Farmington, Colo., was drowned July 7. He was formerly postmaster.

**Dr. Archibald Cunningham**, of Detroit, Mich., a native of Scotland, born in Edinburgh, who had practiced in Detroit for 25 years, died July 2.

**Dr. B. S. Scott**, a resident of Washington, died of heart failure at North Yakima, Wash., where he has practiced for quite a time, Sunday, July the 4th. He was 56 years old.

**Dr. S. H. Spaulding**, who had practiced at Vergennes, Vt., for four years, died at his home suddenly July 2 of heart failure. He was a graduate of the Philadelphia Dental College, Class '05.

**Dr. Harry T. Rand**, a well-known dentist of Springfield, Mo., died June 15 while being brought from St. Louis to his home. He was a graduate of the 1901 class of the Western Dental College, Kansas City.

**Dr. William Nobles**, the oldest dentist in Brunswick, Ga., died June 10, after an extended illness. He was survived by his wife, three sons and two daughters. He was born in Americus, Ga., and moved to Brunswick when a young man.

**Dr. M. H. Knapp**, a well known dentist of Saginaw, Mich., died in Milwaukee June 30, as the result of an automobile accident. He formerly practiced at Adrian and later at Jackson. The remains were moved to Saginaw for interment.

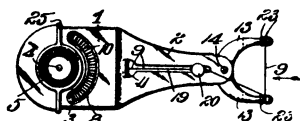
**Dr. Butterfield**, a prominent young dentist of Poteau, Ark., was drowned July 2 in the Poteau river, while bathing with some friends. He had but recently completed his college course and had been a resident of Poteau but a short time.

**George T. Carpenter, M. D., D. D. S.**, formerly of Chicago, late of Buchanan, Mich., died at the latter place July 19, 1909, of emphysema. He was in his sixty-first year and had practiced dentistry in Chicago and Girard Kans., for nearly forty years. Dr. Carpenter was at one time a member of the faculty of the Illinois Dental School.

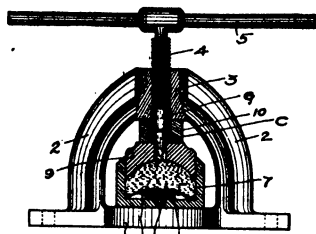
# DENTAL PATENTS

**Fig. 1.**

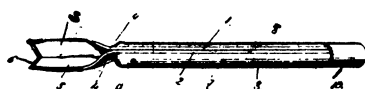
**924,543. Dental Appliance.** Birney Dysart, St. Louis, Mo., Filed Feb. 24, 1908. Serial No. 417,358. 1. In a dental appliance of the character described, the combination with a body portion, of a pair of arms pivoted thereto intermediate of their ends, a quantity of dental floss and means in connection with the arms for stretching a strand of the dental floss thereon, as and for the purposes set forth.



**FIG. 1**



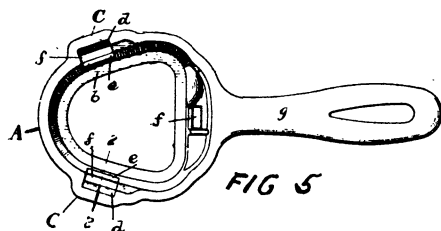
**FIG 4**



**FIG 2**



**FIG 3**



**FIG 5**

**Fig. 2.**

**869,035. Dental Instrument.** William C. Wolford, Confluence, Pa. Filed Jan. 23, 1907. Serial No. 353,716. 1. A vulcanite trimmer consisting of two pieces of metal pivotally connected together, said pieces of metal having their ends contracted and twisted to form angularly disposed blades having the blunt ends beveled to form cutting edges, handles carried by said pieces of metal, and a threaded sleeve or ferrule for retaining said pieces of metal together.

**Fig. 3.**

**910,870. Artificial Tooth.** Gideon Sidley, Philadelphia, Pa. Filed May 12, 1908. Serial No. 432,344. 1. An artificial tooth comprising a facing of porcelain, or the like, having affixed thereto a rearwardly projecting loop, in combination with a metallic backing having a recess, and a retaining pin permanently secured at one end to said backing so as to depend at or adjacent the mouth of the recess, whereby the said loop, by relative movement of the facing and backing, can be seated within the recess and engaged with the pin.

**Fig. 4.**

**889,085. Dental Swaging Apparatus.** Harry W. Allwine, Omaha, Neb. Filed Nov. 26, 1907. Serial No. 403,985. 1. In a device of the class described, the combination with a cylinder, and a piston fitting therein and having a central aperture of relatively small area, of a press having a plunger adapted to enter the aperture in the piston, and a removable spacing-block disposed between the piston and the press-frame to limit movement of the piston out of the cylinder, said spacing-block having a side opening through which materials may be placed below the plunger in position to be pressed thereby into the aperture in the piston.

**Fig. 5.**

**884,087. Holder for Dental Flasks.** Ferdinand Groshans, Baltimore, Md. Filed March 29, 1906. Serial No. 308,685. 1. A holder for dental flasks comprising an irregular-shaped ring larger at its top than at the bottom and having on its inner surface recesses which have an open bottom slot, and provided with a handle.

---

THE AMERICAN DENTAL JOURNAL is the most practical dental journal of the day.

A. NUGENT, D. D. S.,  
Cleveland, Ohio.

---

Couldn't get along without THE AMERICAN DENTAL JOURNAL.

DR. O. F. BINGHAM,  
Springvale, Maine.

---

**WANTED.**

William Low complete Seamless Crown System, J. I. Williams, Columbiana, Ohio.

---

**FOR SALE.**

Old established dental practice and outfit in Masonic Temple, Chicago. Address the Harvard Company, Masonic Temple.

"The Traveling Salesman," at the Illinois theater, has scored an emphatic success, where it is being played nightly, Sundays included. James Forbes, also author of "The Chorus Lady," has taken for his central character the best known American type today, "the traveling salesman," and has aimed chiefly at a humorous exposition of his characteristics.

If you are a traveling salesman you will enjoy your namesake; if not, you will laugh for two solid hours at solid unadulterated fun, as you listen to the slangy, snappy story of how the village maiden came into her own through the heroism of the "drummer," who in foiling the villain, restored to the pretty little telegrapher the parental acres, and won her heart.

There is a game of Jack Pots in the Elite Hotel between five traveling salesmen who are stalled in the jerkwater town over Sunday that adds new glories to the idiom of poker.

The company now at the Illinois is the original one that greatly helped this comedy's successful nine months' run in New York and comprises Frank J. McIntyre, Elsie Ferguson, William Beach, Sarah McVicker, Arthur Shaw, Percival T. Moore, H. D. Blakemore, Nicholas Burnham, Edward Ellis, Richard Ogden, R. C. Turner and Maude R. Sinclair. Prices, 50c to \$1.50.

#### FOR SALE.

Dental practice and equipment in a Kentucky town, county seat, blue-grass region, 2,000 population, \$500 to \$800, owing to what is included. A bargain for the right man. Address B. B. Stone, Flemingsburg, Ky.

#### FOR SALE.

Office and practice in Indiana town, county seat of 1,800, one competitor, did over \$3,000 last year; want to enter other business. Address C. O. P., AMERICAN DENTAL JOURNAL.

## PYORRHEA

Owing to the value of Sal Hepatica in the treatment of diseases of the uric acid diathesis it has been found specially beneficial in pyorrhea alveolaris, a malady in which rheumatism and gout are potent causes. It contains the salts similar to the celebrated Bitter Waters of Europe, fortified by addition of Lithia and Sodium Phosphate. It stimulates liver, tones intestinal glands, purifies alimentary tract, improves digestion, assimilation and metabolism.

Write for free samples.

**BRISTOL-MYERS CO.**  
BROOKLYN-NEW YORK



**FOR SALE.**

Patent of the most practical and useful dental laboratory appliance on the market. Don't write unless you mean business. J. I. Lee, Demopolis, Ala.

**FOR RENT.**

A dental office with modern conveniences in a city of 12,000 in central Illinois. Address C. J. W., in care of AMERICAN DENTAL JOURNAL.

**ST. LOUIS DENTAL COLLEGE,**

**Dental Department St. Louis University,**

Offers a thoroughly scientific and practical course in Dentistry. Clinical advantages unexcelled.  
For catalogue and full information, address

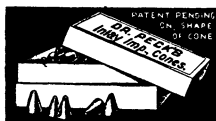
**DR. C. D. LUKENS, Dean,**

Grand Avenue and Caroline Street,

ST. LOUIS, MO.

# DR. PECK'S IMPRESSION CONES

Have YOU a box of them on hand?



If you have never used them, get a sample from your dealer and try it with your next Gold Inlay

They sell at **SIXTY CENTS** a box, which will make over **TWO HUNDRED Impressions.**

**ARTHUR E. PECK MFG. CO.**

1002 DONALDSON BLDG.

MINNEAPOLIS, MINN.

By mentioning the AMERICAN DENTAL JOURNAL when writing to Advertisers you will confer a favor upon both the Advertiser and the Journal.

## INDEX TO ADVERTISEMENTS.

	Page
Aceatoria .....	8
Antikamnia Chemical Co., St. Louis.....	12
American Dental Journal's Card System.....	6, 23, 13
Ascher's Artificial Enamel.....	21, 26, 36
Bridgeford's Plate Paste .....	7
Bristol Meyers Co., Brooklyn, N. Y.....	531
Bohr Inlay Metal .....	27
Briggs Anaesthesia Mixture .....	38
Card System No. 3 .....	17
Castlite .....	17 and Cover
Cutter John D. & Co. Dental Floss .....	15
Chicago College of Dental Surgery, Chicago, Ill.....	16
Chicago Dental Laboratory Co.....	18
College of Dentistry, University of Illinois.....	9
Columbus Dental Co. Steele's Facings .....	3
Crocker, Samuel A. & Co.....	32
Crown Pin Puller.....	24
Davis & Davis, Patents.....	12
Dee, Thomas J. & Co.....	34
De Trey, E. & Sons.....	41
Dental Ad-writer, H. Elfers .....	27
Dentists Supply Co., New York.....	cover
Dr. J. A. Williams, Triolin.....	37
Eureka Plaster Bin, Dr. J. J. Lee.....	7
Eureka Suction Co.....	25
Examination and Account Blanks .....	5
Frame C. L. Co.....	19
Folding Chair .....	39
Goldsmith Bros., Chicago, Ill.....	11
Hall Dental Co. Nerve Paste.....	24
Hammersmith Dr. O. J.....	60
Harvard Co.....	85
Helmerich V. H. & Co.....	0
Hisey Alvatunder .....	12
Indiana Dental College, Indianapolis, Ind .....	22
Lambert Pharmacal Co., St. Louis.....	F. F. R.
Lavoris Chemical Co.....	31
Louisville Dental Laboratory.....	25
Morgan Hastings & Co.....	37
N. W. U. Dental School.....	22
Nolde Dental Mfg. Co., John T., St. Louis .....	20
"Nuvo Teeth".....	4
Office Coat Co.....	30
O'Brien Worthen Co.....	33
Peck's Inlay Cones .....	532
Record Cards No. 3.....	13
Roach's Suction Wax Carver.....	16
Ravenswood Teeth.....	10
Ross, J. W. & Co.....	1-2
Skinner, F. H., DDS.....	30
Spooner Dental Co.....	24
St. Louis Dental College.....	532
Tracy Casting Machine.....	14
Veo's Remedy .....	22
Western New York Chem. Co.....	First Cover

MAIL ORDER DENTAL SUPPLIES

# J. W. Ross & Company

## Dental Supplies

Burton Building, State and Lake Sts.  
CHICAGO

Your requirements are our constant endeavor in our efforts to serve you.

Our **FOURTEEN** years experience in selling Dental Supplies enables us to make rigid analysis of the **QUALITY** of all merchandise before we fill your order. Does this not insure you against receiving unsatisfactory and inferior quality merchandise?

Some of the leading Professors in the Dental Colleges in Chicago as well as other cities have pronounced our goods to be absolutely satisfactory, and have expressed their appreciation by giving us their support.

You must apply commercial principles to your practice to make it a financial success.

By eliminating the expense of the traveling salesman, doing nothing but a **CASH WITH THE ORDER** business we reduce our selling cost to the minimum. By purchasing your supplies direct from the manufacturer, you save the middlemen's profits, which means that your supplies cost you from 25 to 50% less.

Habits are expensive and are easily formed. Not so easily broken.

Our service is as prompt as modern business system will allow. **ALL ORDERS ARE SHIPPED WITHIN THREE HOURS FROM THE TIME WE RECEIVE THEM.** Consequently you experience no unnecessary delay in receiving your goods.


WE do not substitute in filling your orders.

And we are **SQUARE** enough to adjust all matters to your entire satisfaction, giving you the best of everything at all times, even to the extent of refunding your money, if you so desire.

To manage a practice successfully requires constant readiness to change your course, throw away a good idea the minute a better one is found. A constant search for better goods, better instruments, and better methods is the rule.

Ask any Professional or Business man in Chicago or any Mercantile Agency.

Our hundreds of customers are scattered all over the United States. Ask your Competitor, perhaps he is one.

 Our Catalog quotes the lowest prices ever offered on Dental Supplies, the quality that will assist you in conducting a successful practice. It is all ready to send, free on your request.





